

2017 THE KAUFFMAN
INDEX

startup activity

NATIONAL TRENDS

MAY 2017

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NATIONAL TRENDS

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About the Kauffman Index of Entrepreneurship Series

The Kauffman Index of Entrepreneurship is a series of annual reports that measures U.S. entrepreneurship across national, state, and metro levels. Rather than focusing on inputs, the Kauffman Index focuses primarily on entrepreneurial outputs—the actual results of entrepreneurial activity—such as new companies, business density, and growth rates. The Kauffman Index series consists of three in-depth studies: Startup Activity, Main Street Entrepreneurship, and Growth Entrepreneurship.

- The Kauffman Index of Startup Activity is an early indicator of the beginnings of entrepreneurship in the United States, focusing on new business creation, market opportunity, and startup density.
- The Kauffman Index of Main Street Entrepreneurship measures business ownership and density of established, local small businesses.
- The Kauffman Index of Growth Entrepreneurship focuses on the growth of entrepreneurial businesses, as measured by growth in both revenue and employment.

In this release, we present the Kauffman Index of Startup Activity, a comprehensive indicator of new business creation in the United States. The Startup Activity Index integrates several high-quality sources of timely entrepreneurship information into one composite indicator, relying on three components to measure startup activity:

- Rate of New Entrepreneurs
- Opportunity Share of New Entrepreneurs
- Startup Density

The Kauffman Index of Entrepreneurship series represents extensive research and attempts to present a balanced perspective on how to measure entrepreneurship; however, because we recognize that entrepreneurship is a complex phenomenon, we expect to further revise and enhance the Index in the coming years.

The specific indicators from each report help tell America's entrepreneurship story. All current and past reports, along with the data relevant to their locales, are available at www.kauffmanindex.org.

Startup Activity Executive Summary

The Startup Activity Index is a comprehensive indicator of new business creation in the United States, integrating several high-quality sources of timely entrepreneurship information into one composite indicator of startup activity. The Index captures business activity in all industries and is based on both a nationally representative sample size of more than a half-million observations each year and on the universe of all employer businesses in the United States—which covers approximately five million companies. This allows us to look at both entrepreneurs and the startups they create.

This report presents trends in startup activity over the past two decades for the United States. Two other reports look at these same trends in all fifty states and the forty largest U.S. metropolitan areas. Trends in startup activity also are reported at the national level for specific demographic groups for some of the Index components, when available.

National Trends in Startup Activity

Startup Activity Index

- After two years of sharp increases, the Startup Activity Index went up slightly in 2016. After falling with the Great Recession and reaching its lowest point in the last twenty years just three years ago, this rebound is encouraging.
- Despite the recent positive trend, new businesses with employees—those creating jobs for people besides the entrepreneur—are still in a long-term decline compared to levels in the 1980s.

Rate of New Entrepreneurs

- Looking inside the components of the Startup Activity Index, the Rate of New Entrepreneurs in the United States went down slightly, from 0.33 percent to 0.31 percent.
- The Rate of New Entrepreneurs of 0.31 percent means that 310 out of every 100,000 adults became new entrepreneurs in a given month. This number translates into approximately 540,000 new business owners each month during the year.

Opportunity Share of New Entrepreneurs

- The Opportunity Share of New Entrepreneurs, the proportion of new entrepreneurs driven primarily by “opportunity” rather than “necessity”—necessity entrepreneurs defined as new entrepreneurs who were previously unemployed and looking for a job—reached 86.3 percent in 2016 and is now more than twelve percentage points higher than it was in 2009 at the height of the Great Recession.
- The rise in Opportunity Share of New Entrepreneurs has been widespread across most demographic groups. Nonetheless, opportunity entrepreneurship is much lower for adults without formal higher education—compared to

Older adults are a growing segment of the U.S. entrepreneurial population. Individuals ages fifty-five to sixty-four have gone from making up 14.8 percent of new entrepreneurs in 1996 to 25.5 percent of all new entrepreneurs in 2016.

adults with college education; as well as for Blacks and Latinos, compared to Whites and Asians.

Startup Density

- Looking at slightly later-stage startups, those new businesses hiring employees, Startup Density estimates went up in 2016, from 81.6 startups per 1,000 employer businesses in 2015 to 85.4 in 2016.

National Trends in Entrepreneurial Demographics

Gender of New Entrepreneurs—Male and Female Entrepreneurs

- The Rate of New Entrepreneurs has gone down for both male and female entrepreneurs—from 0.42 percent to 0.39 percent for males and from 0.26 percent to 0.23 percent for females. A Rate of New Entrepreneurs of 0.39 means that 390 out of every 100,000 males became new entrepreneurs in a given month.

Ethnicity of New Entrepreneurs

- While most new entrepreneurs are still White, there is a growing share of minority entrepreneurs in the United States.
- However, there is still a gap in opportunity entrepreneurship among entrepreneurs of different races. Opportunity entrepreneurship is highest for Asians and Whites, and lowest for Blacks and Latinos.

Nativity of New Entrepreneurs—Immigrant and Native Entrepreneurs

- Immigrant entrepreneurs now account for almost 30.0 percent of all new entrepreneurs in the United States, up from 13.3 percent in 1996. The percentage of immigrant

entrepreneurs in the United States is on a two-decade high, reflecting the United States' increasing population of immigrants as well as the much higher Rate of New Entrepreneurs among immigrants.

- Immigrants are almost twice as likely as the native-born to become entrepreneurs, with the Rate of New Entrepreneurs being 0.52 percent for immigrants, compared to 0.26 percent for the native-born.

Age of New Entrepreneurs

- The age of new entrepreneurs in the United States is basically split evenly in 2016. However, younger entrepreneurs (ages twenty to thirty-four) have been on the decline, down from 34.3 percent of all new entrepreneurs in 1996 to 24.4 percent in 2016.
- On the other hand, older adults are a growing segment of the U.S. entrepreneurial population. Individuals ages fifty-five to sixty-four have gone from making up 14.8 percent of new entrepreneurs in 1996 to 25.5 percent of all new entrepreneurs in 2016.

Educational Background of New Entrepreneurs

- New entrepreneurs in the United States continue to come from many educational backgrounds. However, since 1996, the share of new entrepreneurs who were college graduates has increased from 23.7 percent to 30.1 percent. This makes entrepreneurs with college degrees the biggest educational category of new entrepreneurs in the United States.

Veteran Status of New Entrepreneurs

- New veteran entrepreneurs continue to be a smaller part of the U.S. entrepreneurial population, mostly reflecting a declining population of veterans in the country.

Immigrant entrepreneurs now account for almost 30.0 percent of all new entrepreneurs in the United States, up from 13.3 percent in 1996. This is the highest the share of immigrant entrepreneurs has been in twenty years.

Understanding Startup Activity—A Look at the Indicators

The Startup Activity Index is an index measure of a broad range of startup activity in the United States across national, state, and metropolitan-area levels. The Startup Activity Index captures startup activity along three dimensions:

1. The **Rate of New Entrepreneurs** in the economy—the percentage of adults becoming entrepreneurs in a given month.
2. The **Opportunity Share of New Entrepreneurs**—the percentage of new entrepreneurs driven primarily by “opportunity” as opposed to “necessity.”
3. **Startup Density**—the rate at which businesses with employees are created in the economy.

The combination of these three distinct and important dimensions of new business creation creates this broad view of startup activity in the country, across national, state, and metropolitan-area levels.

The Startup Activity Index is an early indicator of new business creation in the United States. Capturing new entrepreneurs in their first month and new employer businesses in their first year, the Index provides the earliest documentation of new business development across the country.

The Startup Activity Index captures all types of business activity and is based on nationally representative sample sizes of

more than a half million observations each year or administrative data covering the universe of employer business entities—a dataset covering more than five million businesses. The separate components of the Startup Activity Index also provide evidence on potentially different trends in business creation created by “opportunity” business creation relative to unemployment-related (“necessity”) business creation over the business cycle. The Startup Activity Index improves over other possible measures of entrepreneurship because of its timeliness, dynamic nature, exclusion of “casual” businesses, and inclusion of all types of business activity, regardless of industry.

The Components of the Startup Activity Index

The Startup Activity Index provides a broad index measure of business startup activity in the United States. It is an equally weighted index of three normalized measures of startup activity.¹ The three component measures of the Startup Activity Index are:

1. The **Rate of New Entrepreneurs** in the economy, calculated as the percentage of adults becoming entrepreneurs in a given month.
2. The **Opportunity Share of New Entrepreneurs**, calculated as the percentage of new entrepreneurs driven primarily by “opportunity” vs. “necessity.”
3. The **Startup Density** of a region, measured as the number of new employer businesses, normalized by the business population.



Rate of New Entrepreneurs



Opportunity Share of New Entrepreneurs



Startup Density

1. We normalize each of three measures by subtracting the mean and dividing by the standard deviation for that measure (i.e., create a z-score for each variable). This creates a comparable scale for including the three measures in the Startup Activity Index. We use annual estimates from 1996 to the latest year available (2016) to calculate the mean and standard deviations for each component measure (see Methodology and Framework for more details).



Rate of New Entrepreneurs

- Defined as the percent of the U.S. adult population that became entrepreneurs, on average, in a given month.
- Provides an early and broad measure of business ownership.
- Includes entrepreneurs with incorporated or unincorporated businesses, and those with or without employees.
- Uses data based on the Current Population Survey, jointly produced by the U.S. Census Bureau and the U.S. Bureau of Labor Statistics.
- What the number means:
 - For example, assume that the Rate of New Entrepreneurs was 0.33 percent for the United States in a given year. That would mean that, on average, 330 people out of every 100,000 adults became entrepreneurs in the United States in each month.

Before presenting trends in the Startup Activity Index, we briefly discuss each component measure (see Methodology and Framework for more details).

First, the Rate of New Entrepreneurs captures the percentage of the adult, non-business-owner population that starts a business each month. This component was formerly known as the Kauffman Index of Entrepreneurial Activity and was presented in a series of reports over about a decade beginning in 1996 (Fairlie 2014).² The Rate of New Entrepreneurs as measured here captures all new business owners, including

those who own incorporated or unincorporated businesses and those who are employers or non-employers.³ The Rate of New Entrepreneurs is calculated from matched data from the Current Population Survey (CPS), a monthly survey conducted by the U.S. Bureau of Labor Statistics.

Another component measure of the Startup Activity Index is the percentage of new entrepreneurs driven by “opportunity entrepreneurship” as opposed to “necessity entrepreneurship.” The Rate of New Entrepreneurs includes businesses of all types, and thus cannot cleanly disaggregate between the



Opportunity Share of New Entrepreneurs

- Serves as a proxy indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities.
- Measures the percentage of new entrepreneurs who were not unemployed before starting their businesses (e.g., new entrepreneurs who were previously working for another organization or in school).
- Acts as a broad proxy for business growth prospects. Entrepreneurs who were previously unemployed may be acting out of necessity and, therefore, may be more likely to start businesses with lower growth potential.
- Offers a more nuanced understanding of changes in the rate of new entrepreneurs, especially during weak job markets or economic recessions. If the rate of new entrepreneurs increases but the opportunity share of new entrepreneurs is low, we understand that many new entrepreneurs were unemployed before starting their businesses and may have started these companies largely out of necessity.
- Uses data based on the Current Population Survey, jointly produced by the U.S. Census Bureau and the U.S. Bureau of Labor Statistics.
- What the number means:
 - For example, if the opportunity share of new entrepreneurs were 80 percent for a state in a given year, it would mean that approximately eight out of every ten new entrepreneurs in that state in that year had other jobs or were in school (or were in another labor market state) before they started their businesses. Meanwhile, two out of every ten entrepreneurs in that state would have started their businesses while they were unemployed.

2. See <http://www.kauffman.org/what-we-do/research/2014/04/the-kauffman-index-of-entrepreneurial-activity-1996-2013>.

3. The U.S. Census Bureau notes that the definitions of non-employers and self-employed business owners are not the same. Although most self-employed business owners are non-employers, about a million self-employed business owners are classified as employer businesses. <http://www.census.gov/econ/nonemployer/index.html>.



Startup Density

- Estimates the number of startup firms by total employer population.
- Measures the number of new employer startup businesses normalized by the employer firm population of an area. Because companies captured by this indicator have employees, they tend to be at a more advanced stage than are the companies in the rate of new entrepreneurs measure.
- Defines startup businesses as employer firms less than one year old that employ at least one person besides the owner. This measure includes all industries.
- Uses data based on the U.S. Census's Business Dynamics Statistics.
- What the number means:
 - For example, if the startup density for a metropolitan area were eighty-nine per 1,000 businesses in a given year, it would mean that, for every 1,000 employer businesses in the metro area, there were eighty-nine employer startup firms that were less than one year old in that year.

creation of high-growth-potential businesses and individuals starting businesses because of limited job opportunities.⁴ One approximate method for disentangling these two types of startups is to examine the share of new entrepreneurs coming out of unemployment compared to the share of new entrepreneurs coming out of wage and salary work, school, or other labor market statuses (Fairlie 2014). Individuals starting businesses out of unemployment might be more inclined to start those businesses out of necessity than opportunity (although many of those businesses eventually could be very successful).

The third component of the Startup Activity Index is a measure of the rate of creation of businesses with employees. These employer businesses are generally larger and have higher growth potential than non-employer businesses do. Startup Density is defined as the number of newly established employer businesses to the total employer business population (in 1,000s). Both numbers come from the Bureau of Labor Statistics Business Dynamics Statistics (BDS) and are taken from the universe of businesses with payroll tax records in the United States, as recorded by the Internal Revenue Service. Although new businesses with employees represent only a small share of all new businesses, they represent an important group for job creation and economic growth.

In this report, we present national estimates of the Startup Activity Index first. We then present trends in each of the three component measures of the Index. Some of the component measures provide information that allows for a presentation of trends by demographic groups.

A Big-Tent Approach to Entrepreneurship

The Kauffman Index of Entrepreneurship—the umbrella under which all the topical Kauffman Index reports reside—attempts to view the complex phenomenon of entrepreneurship from many angles, each adding insight into the people and businesses that contribute to America's overall entrepreneurial dynamism.

Entrepreneurship is not a monolithic phenomenon, but instead includes many diverse and moving parts. Creating new businesses is a different economic activity from running small businesses, which in turn is different from growing businesses. The Kauffman Index attempts to concretely measure these different kinds of entrepreneurship—Startup Activity, Main Street, and Growth—through its three sets of reports that present a more holistic view of entrepreneurship in the United States, each with a deeper dive at the national, state, and metropolitan levels:

1. The **Startup Activity Index** focuses on the beginnings of entrepreneurship, specifically new business creation, market opportunity, and startup density.
2. The **Main Street Index** focuses on the prevalence of local, small business ownership.
3. The **Growth Entrepreneurship Index** focuses on growing companies.

Entrepreneurship is not a monolithic phenomenon, but instead includes many diverse and moving parts. Creating new businesses is a different economic activity from running small businesses, which in turn is different from growing businesses.

4. See Fairlie (2011) for more evidence and discussion.






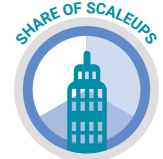



Together, these three indices present a more holistic view of entrepreneurship in America.

Each of the three indices is constructed to give a spectrum of entrepreneurship measures from an industry-agnostic perspective. Table A summarizes the approach we use across the reports.

While at first pass, one might expect certain patterns that appear in the Startup Activity Index to be tied to patterns

that appear in future years of the Main Street and Growth Entrepreneurship indices, we have taken steps to mitigate direct relationships. Different locations will have different performances on each of the indices, and high (or low) levels of activity in any given index does not cause or imply high (or low) levels of activity in the others.

Table A
Summary of Components Used Across Reports

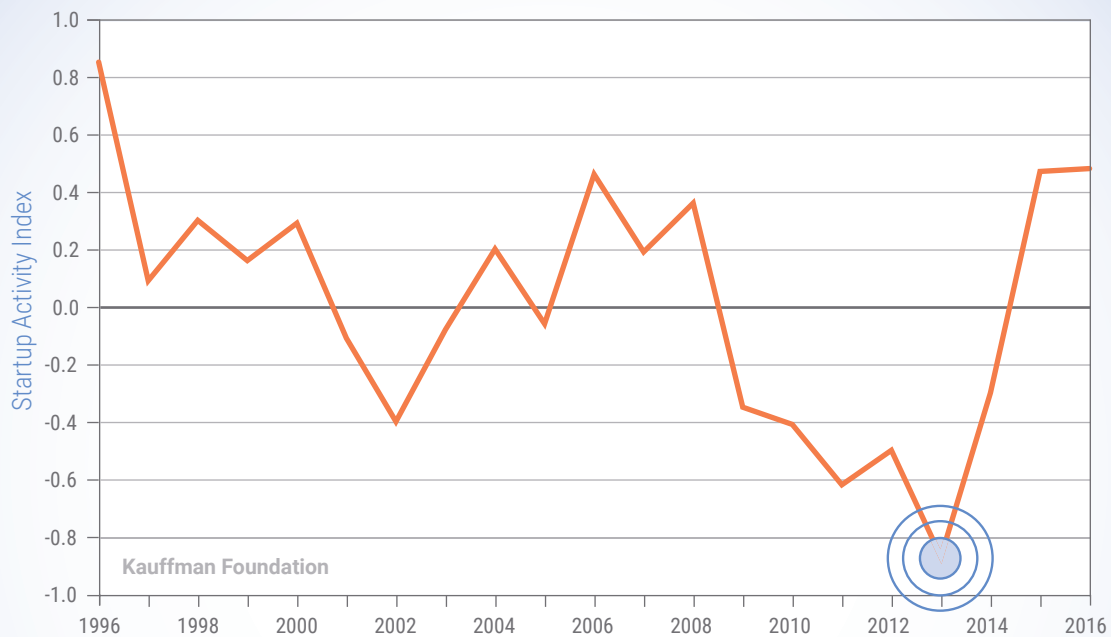
Startup Activity	Main Street Entrepreneurship	Growth Entrepreneurship
 <p>Rate of New Entrepreneurs The percentage of adults transitioning into entrepreneurship at a given point in time</p>	 <p>Rate of Business Owners The total number of business owners in a location at a given point in time</p>	 <p>Rate of Startup Growth The average growth of a cohort of new startups in their first five years</p>
 <p>Opportunity Share of New Entrepreneurs The percentage of new entrepreneurs driven primarily by "opportunity" vs. "necessity"</p>	 <p>Survival Rate of Firms The percentage of firms in operation throughout their first five years</p>	 <p>Share of Scaleups The number of businesses that started small and grew to employ at least fifty people by their tenth year of operation as a percentage of all businesses ten years and younger</p>
 <p>Startup Density The number of new employer businesses, normalized by population</p>	 <p>Established Small Business Density The number of businesses five years old and older with less than fifty employees, normalized by population</p>	 <p>High-Growth Company Density The number of fast-growing companies with at least \$2 million in annual revenue, normalized by business population</p>

National Trends in Startup Activity

After two years in a row of sharp increases, the Startup Activity Index rose slightly in 2016. Our broadest measure of startup activity is now above the U.S. average from the last twenty years. Figure 1 and Table 1 present results.

In the two decades between the late 1990s and today, the lowest levels of the Startup Activity Index occurred just three years ago. The recovery of startup activity in the United States since then has been driven mostly by more people entering entrepreneurship and more people entering out of choice rather than necessity. Moreover, we are finally seeing an increase in the number of startups with employees—although those remain precariously below pre-recession levels.

Figure 1
Startup Activity Index (1996–2016)

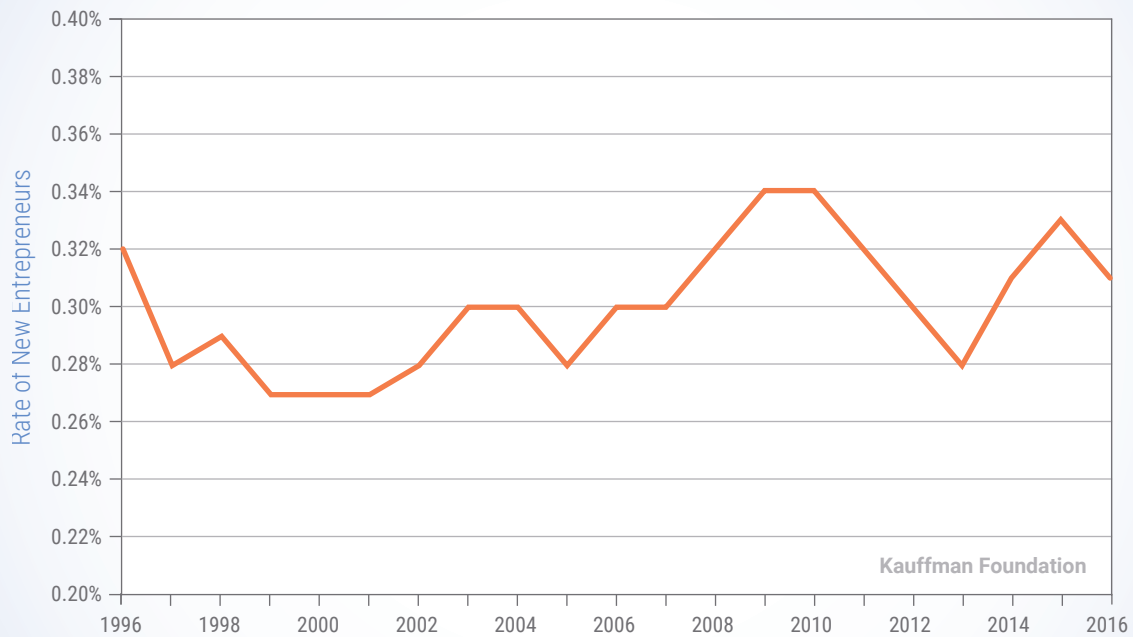


SOURCE: Kauffman Index of Startup Activity, calculations from CPS and BDS.
For an interactive version, please see: www.kauffmanindex.org.

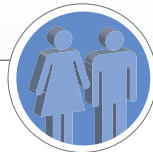


In 2013, the Startup Activity Index was at its lowest point in the last twenty years. Today it has gone up three years in a row, reaching close to the peak before the Great Recession drop.

Figure 1A
Rate of New Entrepreneurs (1996–2016)



SOURCE: Kauffman Foundation calculations from CPS.
For an interactive version, please see: www.kauffmanindex.org.



National Trends in Rate of New Entrepreneurs

This section discusses trends in the Rate of New Entrepreneurs. The Rate of New Entrepreneurs measures the percentage of the adult, non-business-owner population that starts a business each month. It captures all new business owners, including those who own incorporated or unincorporated businesses, and those who are employers or non-employers. The Rate of New Entrepreneurs previously was reported in the

Kauffman Index of Entrepreneurial Activity (Fairlie 2014), and, in this release, we update results from previous reports. Table 1 and Figure 1A present results. In 2016, an average of 0.31 percent of the adult population, or 310 out of 100,000 adults, created new businesses each month.⁵ This business-creation rate translates into roughly 540,000 adults switching into self-employed business ownership in each month during the year. In 2016, the Rate of New Entrepreneurs declined after reaching a recent peak of 0.33 percent in 2015. The Rate of New Entrepreneurs increased from 0.28 percent of the adult population (280 out of 100,000) in 2013 to 0.33 percent (330 out of 100,000) in 2015, but then decreased (310 out of 100,000) in 2016.

This business-creation rate translates into roughly 540,000 adults switching into self-employed business ownership in each month during the year. In 2016, the Rate of New Entrepreneurs declined after reaching a recent peak of 0.33 percent in 2015.

5. Estimates of annual business-creation rates would be approximately six to eight times higher. Annual rates are not twelve times higher than monthly rates because individuals potentially can start and exit from business ownership multiple times within the same year.

Rate of New Entrepreneurs by Demographic Groups

The detailed demographic information and large sample sizes available in the Current Population Survey (CPS) allow for the estimation of separate business-creation rates by gender, race, immigrant status, age, and level of education. This represents an advantage of the individual-level CPS data because large, nationally representative business-level

datasets typically provide either no or very limited demographic information on owners. The Rate of New Entrepreneurs decreased for both men and women from 2015 to 2016 (Table 2 and Figure 2 report results). The Rate of New Entrepreneurs decreased to 0.39 percent (390 out of 100,000) for men in 2016 and to 0.23 percent (230 out of 100,000) for women. Overall, men are substantially more likely to start businesses each month than are women, which holds in all reported years.

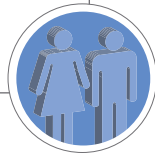
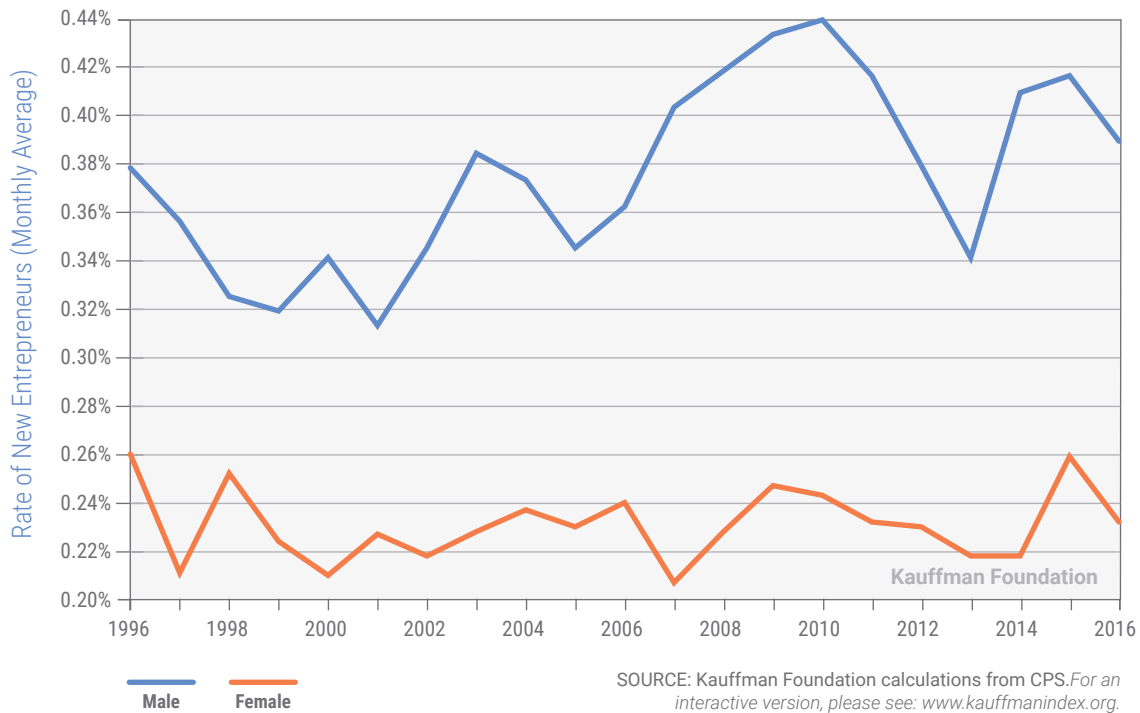


Figure 2

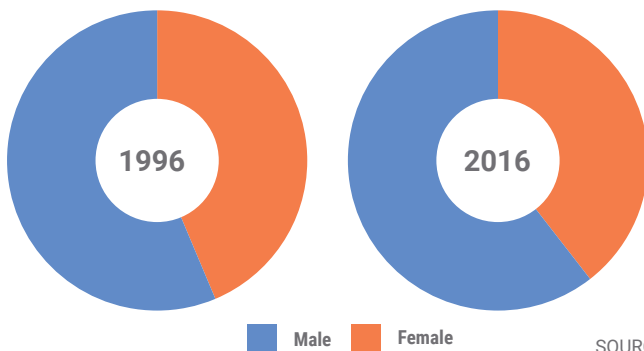
Rate of New Entrepreneurs by Gender (1996–2016)



SOURCE: Kauffman Foundation calculations from CPS. For an interactive version, please see: www.kauffmanindex.org.

Figure 2A

Changes in Composition of New Entrepreneurs by Gender (1996, 2016)

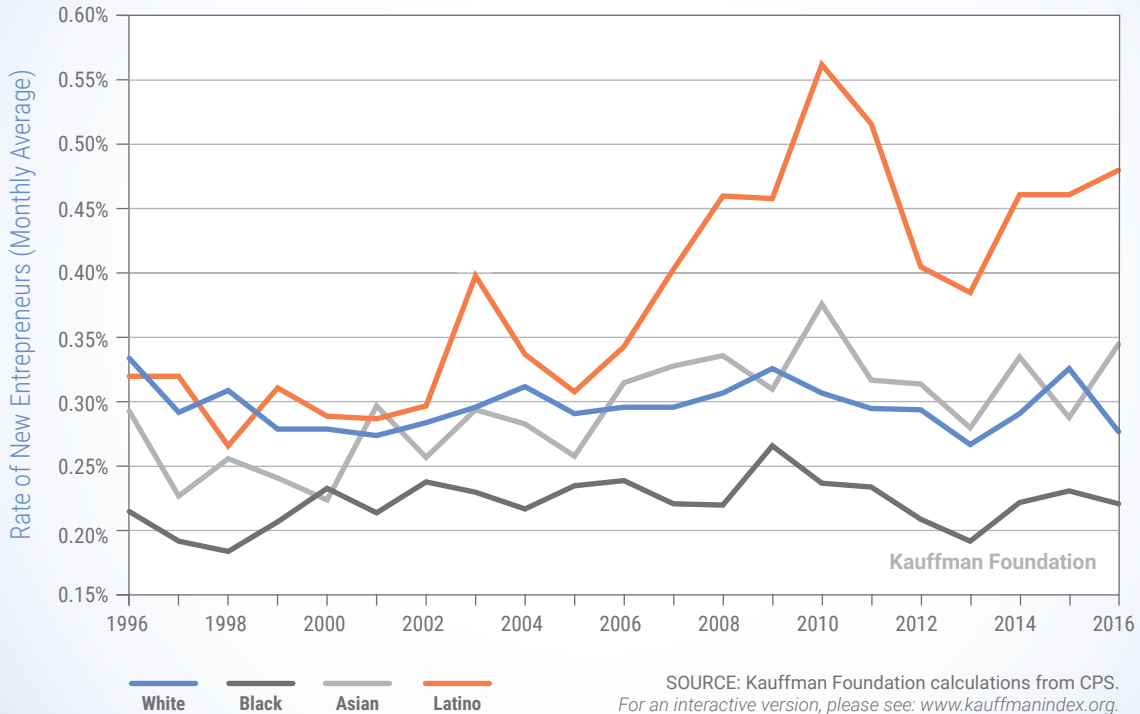


Gender	1996	2016
Male	56.33%	60.51%
Female	43.67%	39.49%

SOURCE: Kauffman Foundation calculations from CPS.

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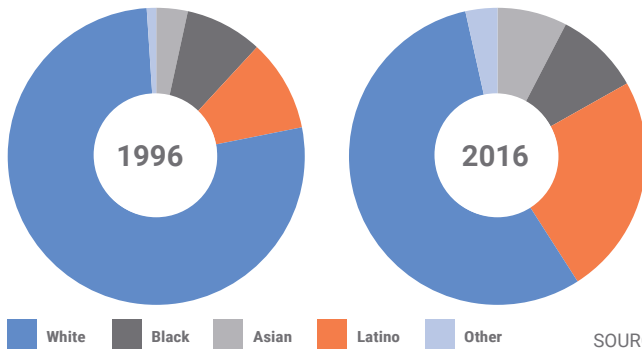
Figure 3
Rate of New Entrepreneurs by Race (1996–2016)



SOURCE: Kauffman Foundation calculations from CPS.
For an interactive version, please see: www.kauffmanindex.org.



Figure 3A
Changes in Composition of New Entrepreneurs by Race (1996, 2016)



Race	1996	2016
White	77.12%	55.59%
Black	8.43%	9.24%
Asian	3.42%	7.59%
Latino	10.01%	24.12%
Other	1.02%	3.46%

SOURCE: Kauffman Foundation calculations from CPS.

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Among minority ethnic and racial groups, Asians and Latinos experienced increases in the Rate of New Entrepreneurs between 2015 and 2016, whereas African Americans experienced a slight decrease in rates. Table 3 and Figure 3 report estimates of total new entrepreneurs' rate by race and ethnicity. The Rate of New Entrepreneurs is highest among Latinos and lowest among African Americans. The White rate of new entrepreneurs decreased from 2015 to 2016.

Reflecting the longer-term trends showing rising Latino rates of entrepreneurship and a growing share of the total U.S. population, the Latino share of all new entrepreneurs rose from 10 percent in 1996 to 24 percent in 2016. Figure 3A reports estimates of the share of new entrepreneurs by race from 1996 to 2016. The Asian share of new entrepreneurs also rose substantially from 1996 to 2016. The White share of new entrepreneurs declined over the past eighteen years, whereas the Black share increased slightly.

The Rate of New Entrepreneurs decreased slightly for immigrants in 2016. Table 4 and Figure 4 report estimates of the Rate of New Entrepreneurs by nativity. The Rate of New Entrepreneurs among immigrants of 0.52 percent is substantially higher than that for the native-born of 0.26 percent. A growing immigrant population and rising entrepreneurship

rate contributed to a rising share of new entrepreneurs that are immigrant. Figure 4A reports estimates of the share of new entrepreneurs by nativity. Immigrant entrepreneurs represent 30 percent of all new entrepreneurs in 2016, which is up substantially from 13 percent in 1996.

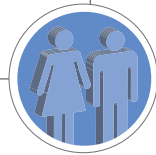


Figure 4

Rate of New Entrepreneurs by Nativity (1996–2016)

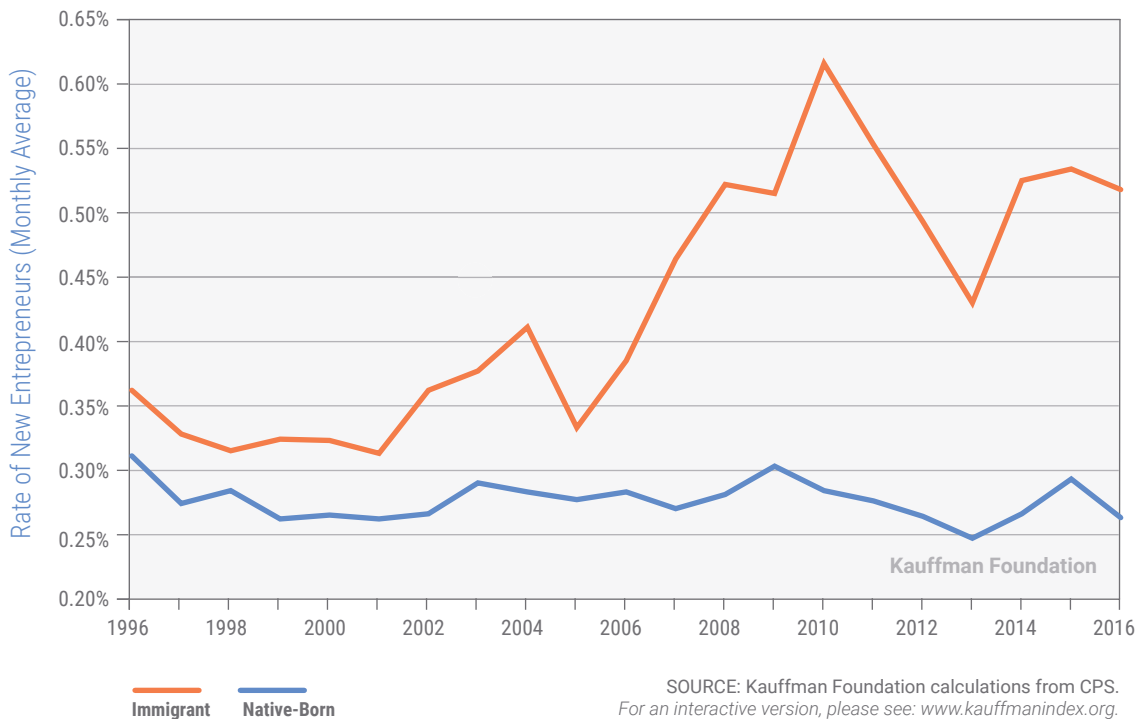
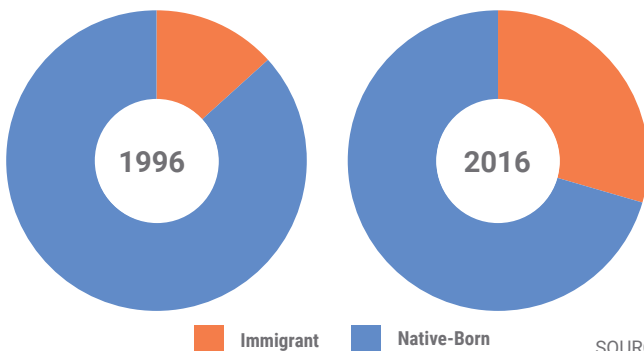


Figure 4A

Changes in Composition of New Entrepreneurs by Nativity (1996, 2016)



Nativity	1996	2016
Immigrant	13.29%	29.50%
Native-Born	86.71%	70.50%

SOURCE: Kauffman Foundation calculations from CPS.

Kauffman Foundation

Figure 5
Rate of New Entrepreneurs by Age (1996–2016)

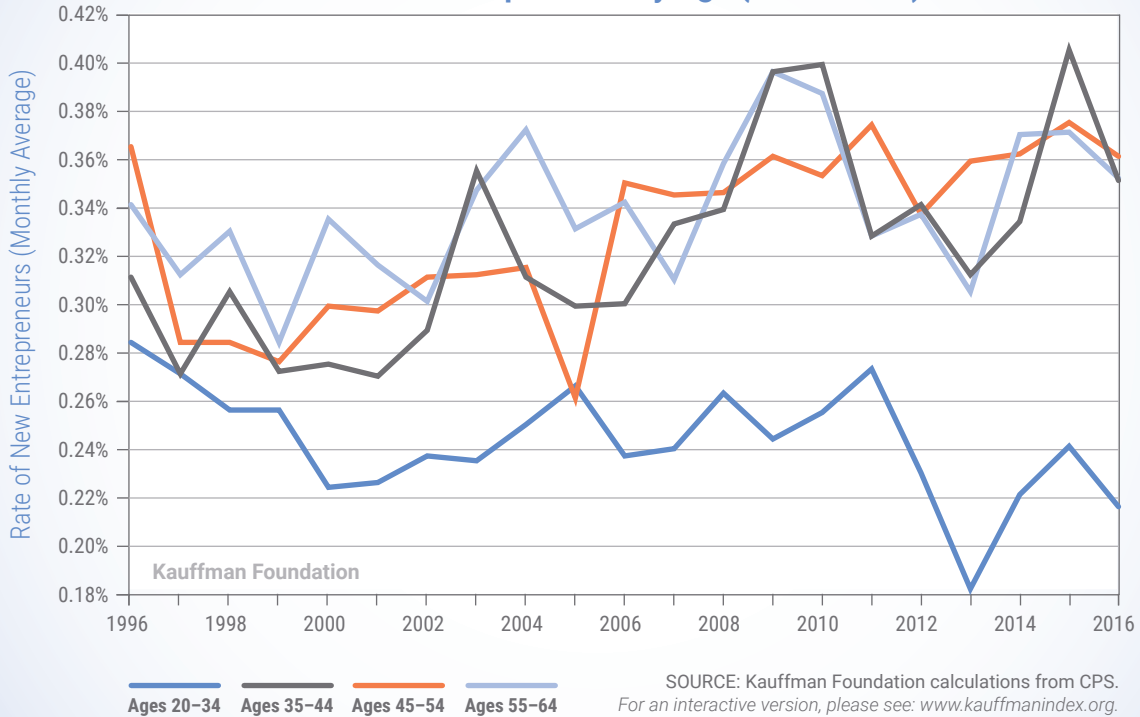
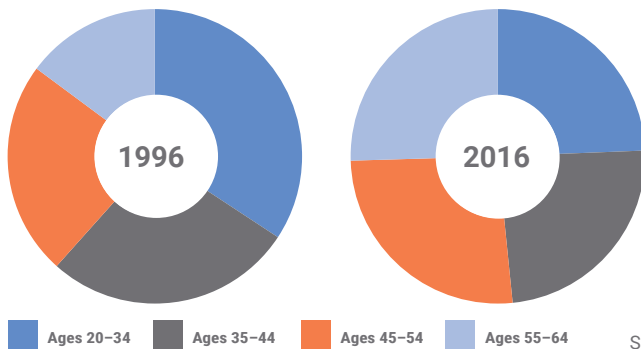


Figure 5A
Changes in Composition of New Entrepreneurs by Age (1996, 2016)



Age	1996	2016
Ages 20-34	34.27%	24.37%
Ages 35-44	27.36%	24.04%
Ages 45-54	23.55%	26.13%
Ages 55-64	14.83%	25.46%

SOURCE: Kauffman Foundation calculations from CPS.

Kauffman Foundation

Table 5 and Figure 5 report estimates of the Rate of New Entrepreneurs by age group. All of the age groups experienced decreases in the Rate of New Entrepreneurs in 2016. The Rate of New Entrepreneurs is the lowest among the youngest group. Figure 5A reports estimates of the share of new entrepreneurs by

age group. An aging population has led to a rising share of new entrepreneurs in the age fifty-five to sixty-four group. This group represented 15 percent of new entrepreneurs in 1996, whereas it represented 26 percent of new entrepreneurs in 2016.

The Rate of New Entrepreneurs decreased for individuals with most levels of education. Table 6 and Figure 6 report estimates by education level. The Rate of New Entrepreneurs increased only among high school dropouts and decreased for

all other levels of education. The Rate of New Entrepreneurs is highest among the least-educated group, but this partially reflects a high level of “necessity entrepreneurship” for this group, arguably driven by more-limited labor market opportunities.

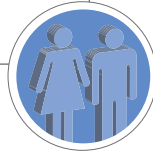


Figure 6
Rate of New Entrepreneurs by Education (1996–2016)

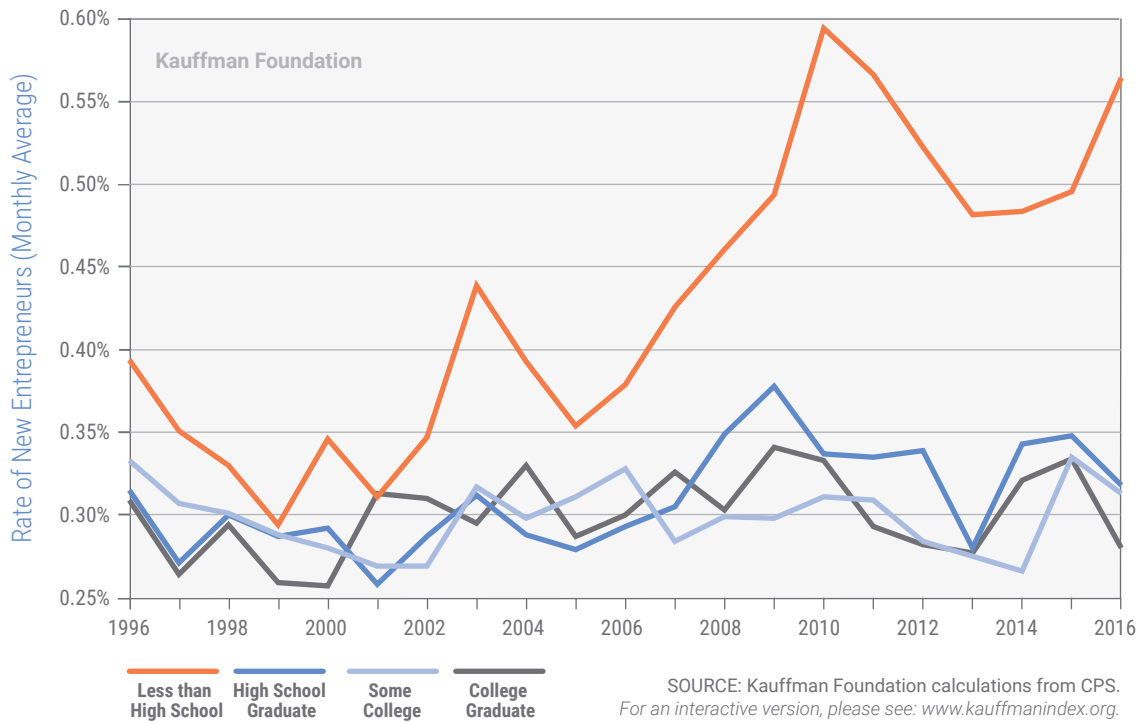
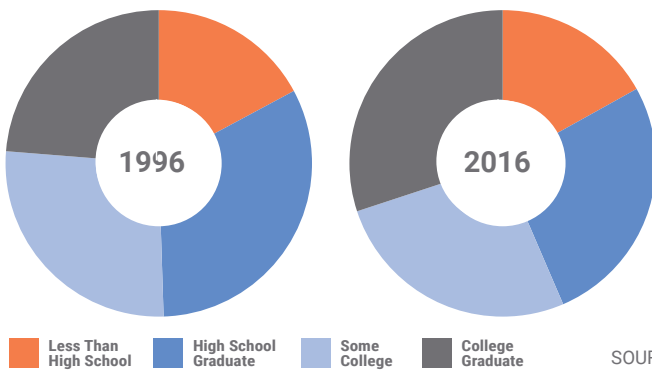


Figure 6A
Changes in Composition of New Entrepreneurs by Education (1996, 2016)



Race	1996	2016
Less than High School	17.16%	16.92%
High School Graduate	32.34%	26.63%
Some College	26.78%	26.40%
College Graduate	23.72%	30.05%

SOURCE: Kauffman Foundation calculations from CPS.

Kauffman Foundation

Figure 7
Rate of New Entrepreneurs by Veteran Status (1996–2016)

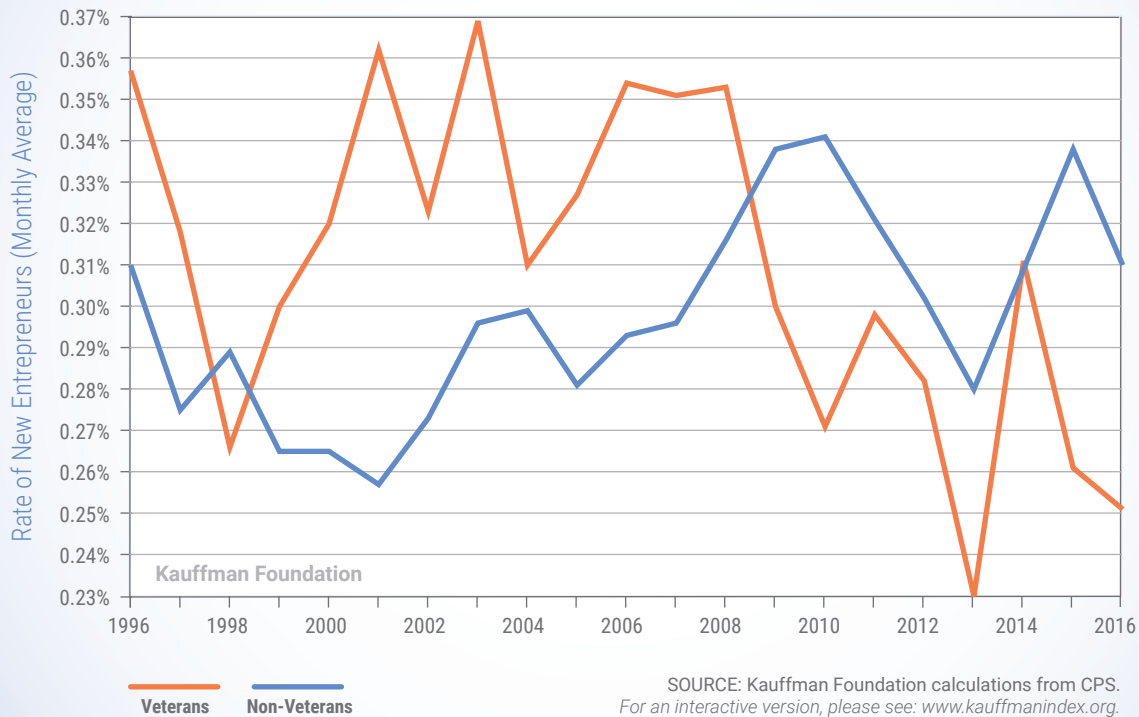
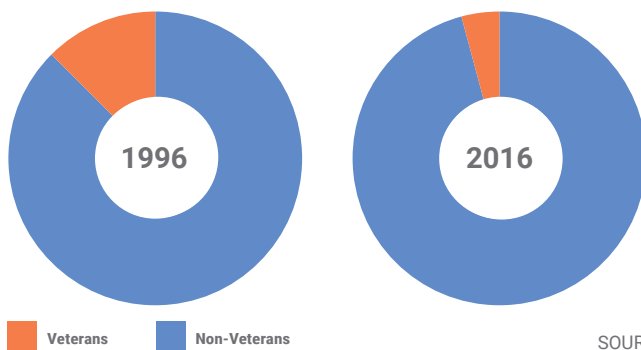


Figure 7A
Changes in Composition of New Entrepreneurs by Veteran Status (1996, 2016)



Veteran Status	1996	2016
Veterans	12.49%	4.16%
Non-Veterans	87.51%	95.84%

SOURCE: Kauffman Foundation calculations from CPS.

Kauffman Foundation

Table 7 and Figure 7 report estimates of the Rate of New Entrepreneurs by veteran status. In 2016, the Rate of New Entrepreneurs was 0.25 percent for veterans, which was lower than the non-veteran rate. The share of all new entrepreneurs represented by veterans was 12 percent in 1996. This share

steadily declined to 4 percent in 2016 (see Figure 7A). Most of the decline in the veteran share of new entrepreneurs over the past two decades was due to the declining share of veterans in the U.S. working-age population.⁶

6. See Fairlie (2012) for more details.



National Trends in Opportunity Share of New Entrepreneurs

With this measure of new entrepreneurs that includes entrepreneurs and businesses of all types, it is impossible to cleanly disaggregate between the creation of high-growth-potential businesses and individuals starting businesses because of limited job opportunities. To identify separate startup motivations, the share of new entrepreneurs coming out of unemployment is compared to the share of the new entrepreneurs coming out of wage and salary work, school, or other labor market statuses. Individuals starting businesses out of unemployment might be more inclined to start those businesses out of necessity than opportunity. The distinction is not perfect because many successful businesses are created by people who have lost their jobs and are unemployed, but the distinction offers at least some suggestive evidence on the influence of economic conditions on overall business creation.

The Rate of New Entrepreneurs coming from individuals who are not unemployed and not looking for a job (i.e.,

"opportunity" entrepreneurship) was substantially higher than at the end of the Great Recession. In 2016, 86.3 percent of the total number of new entrepreneurs was from those who were not unemployed and not looking for a job. This share increased substantially from 2014 and is now more than ten percentage points higher than it was in 2009 at the end of the recession. Figure 1B displays trends in the Opportunity Share of New Entrepreneurs from 1996 to 2016 (Table 1). Over the past two decades, the share of new entrepreneurs engaging in "opportunity" entrepreneurship increased when economic conditions were improving and decreased when economic conditions were worsening. The largest share of "opportunity" entrepreneurship occurred at the height of the "Roaring Nineties," and the smallest share was in 2009 at the end of the Great Recession. The share of opportunity business creation also decreased in the recession of the early 2000s and increased in the following growth period in the mid-2000s. It is important to note, however, that, although the motivation for starting businesses when economic conditions are weak and unemployment rates are high may differ from the motivations behind those created in stronger economic conditions, many of these businesses eventually may be very successful.⁷

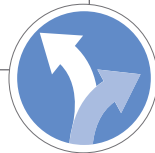


Figure 1B

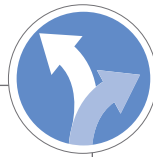
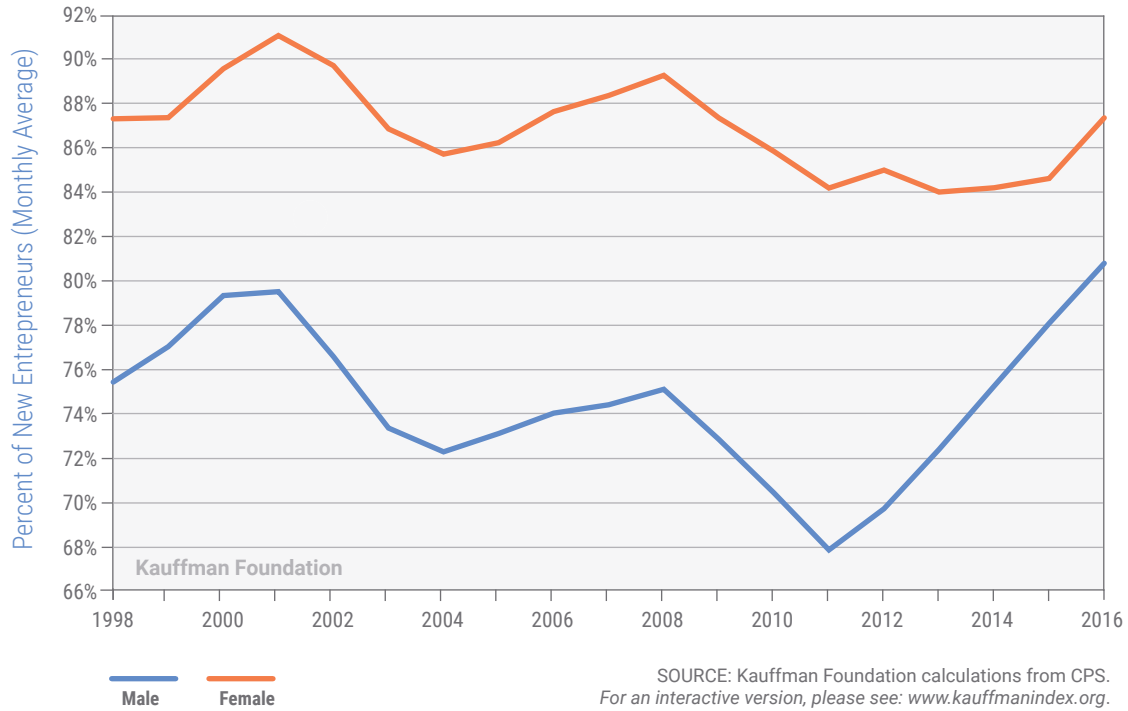
Opportunity Share of New Entrepreneurs (1996–2016)



SOURCE: Kauffman Foundation calculations from CPS. For an interactive version, please see: www.kauffmanindex.org.

7. For example, the majority of Fortune 500 companies were started during recessions or bear markets. See Stangler (2009).

Figure 2B
Opportunity Share of New Entrepreneurs (Three-Year Moving Average)
by Gender (1998–2016)



Opportunity Share of New Entrepreneurs by Demographic Groups

We also examine trends in the opportunity share of new entrepreneurs by demographic groups. Three-year moving averages are reported to increase precision of estimates. The opportunity share of new entrepreneurs increased for both men and women from 2015 to 2016, continuing an upward trend for the past few years as the economy has improved (Figure 2B reports estimates). Interestingly, the opportunity share of entrepreneurship is lower for men than for women, although some of the gap closed during the recent economic recovery. The opportunity share for women is much more stable over the business cycle than is the opportunity share for men.

All racial and ethnic groups, except African Americans, experienced increases in the opportunity share of new entrepreneurs between 2015 and 2016, continuing trends over the past few years. Figure 3B reports estimates of total new entrepreneurs' rate by race and ethnicity. The opportunity share of new entrepreneurs is highest among Asians and lowest among African Americans and Latinos.

The opportunity share increased for immigrants and the native-born in 2016. Figure 4B reports estimates of the opportunity share of new entrepreneurs by nativity. The opportunity share of entrepreneurship is roughly similar for both immigrants and natives.

Figure 5B reports estimates of the opportunity share of new entrepreneurs by age group. All age groups experienced increases in the opportunity share in 2016, continuing the upward trend since the Great Recession. The opportunity share is highest among the oldest age group and lowest among the youngest age group.

The opportunity share of new entrepreneurs increased for all education groups. Figure 6B reports estimates by education level. The opportunity share of entrepreneurship increases with education level: high school dropouts have the lowest opportunity share and college graduates have the highest opportunity share.

Figure 7B reports estimates of the opportunity share of new entrepreneurs by veteran status. The opportunity share of entrepreneurship increased in 2016 among veterans, but remained lower than for non-veterans.

Figure 3B
**Opportunity Share of New Entrepreneurs (Three-Year Moving Average)
 by Race (1998–2016)**

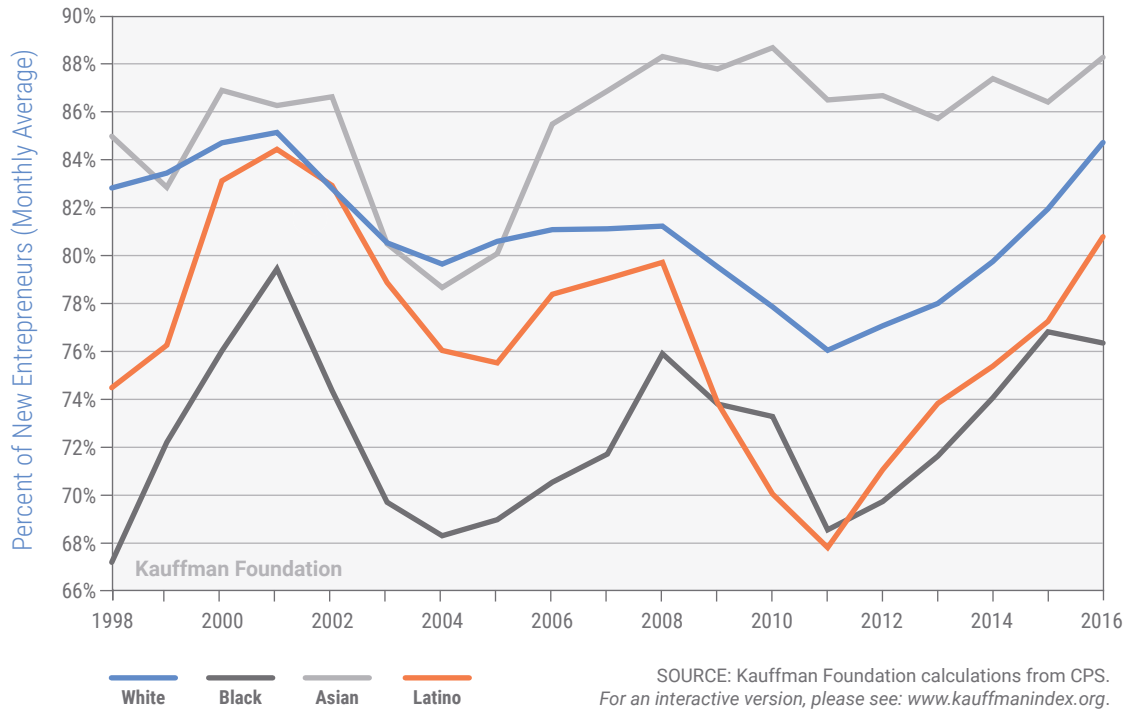


Figure 4B
**Opportunity Share of New Entrepreneurs (Three-Year Moving Average)
 by Nativity (1998–2016)**

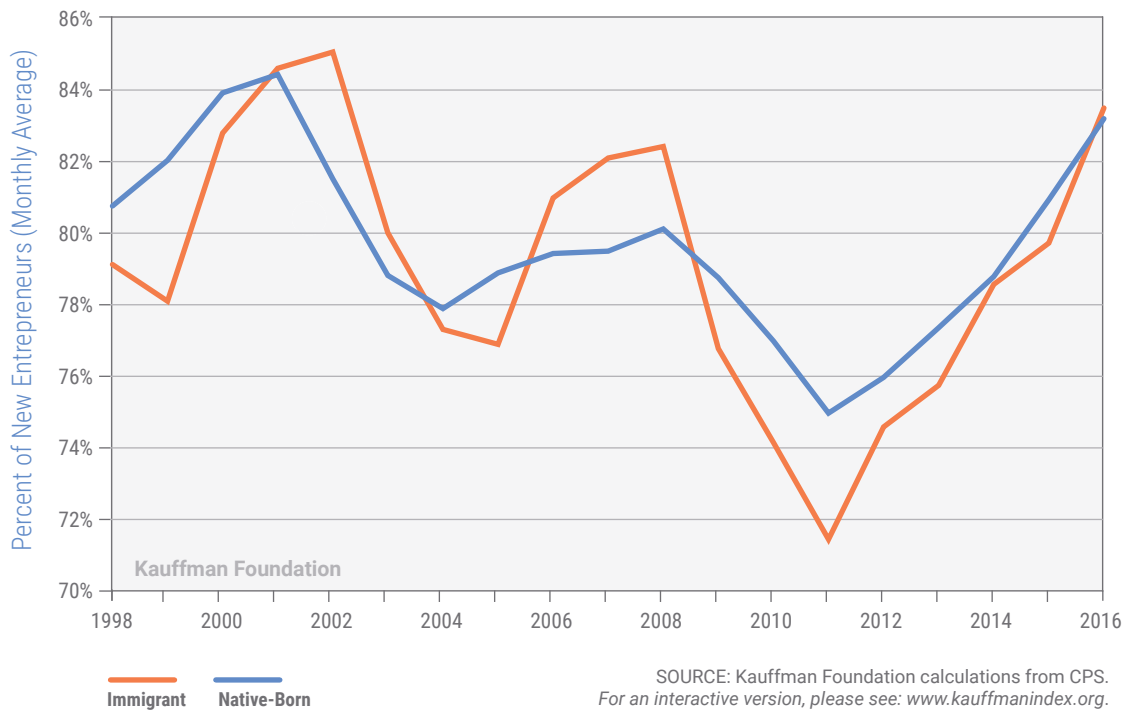


Figure 5B
Opportunity Share of New Entrepreneurs (Three-Year Moving Average)
by Age (1998–2016)

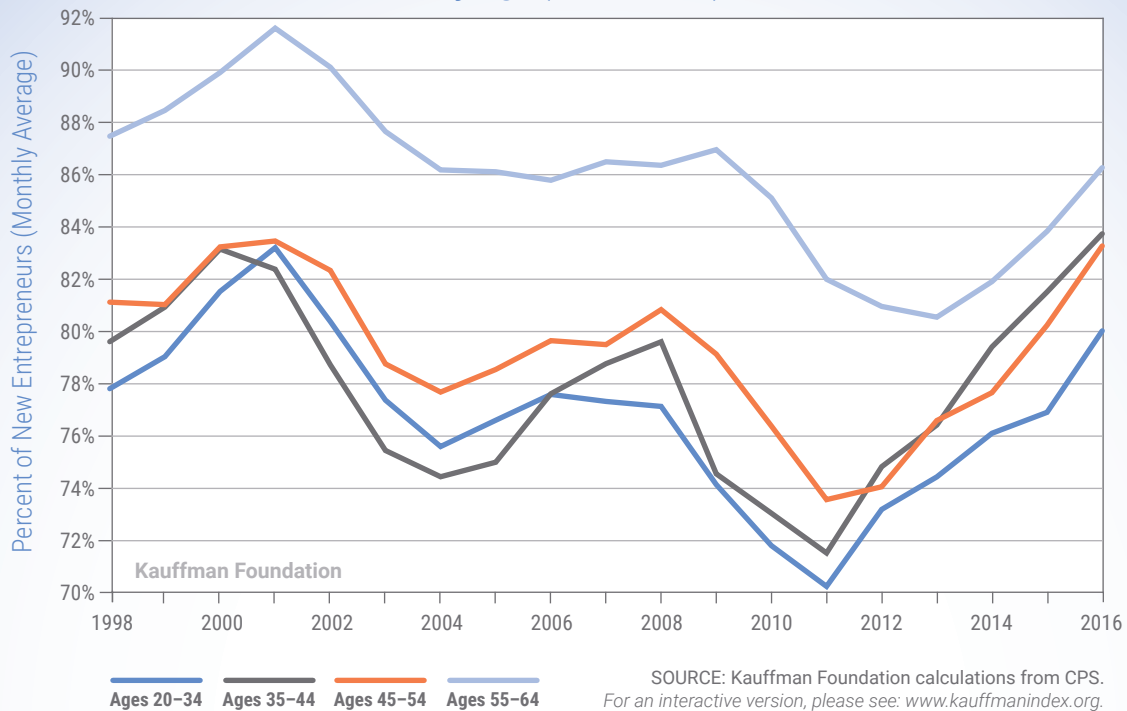


Figure 6B
Opportunity Share of New Entrepreneurs (Three-Year Moving Average)
by Education (1998–2016)

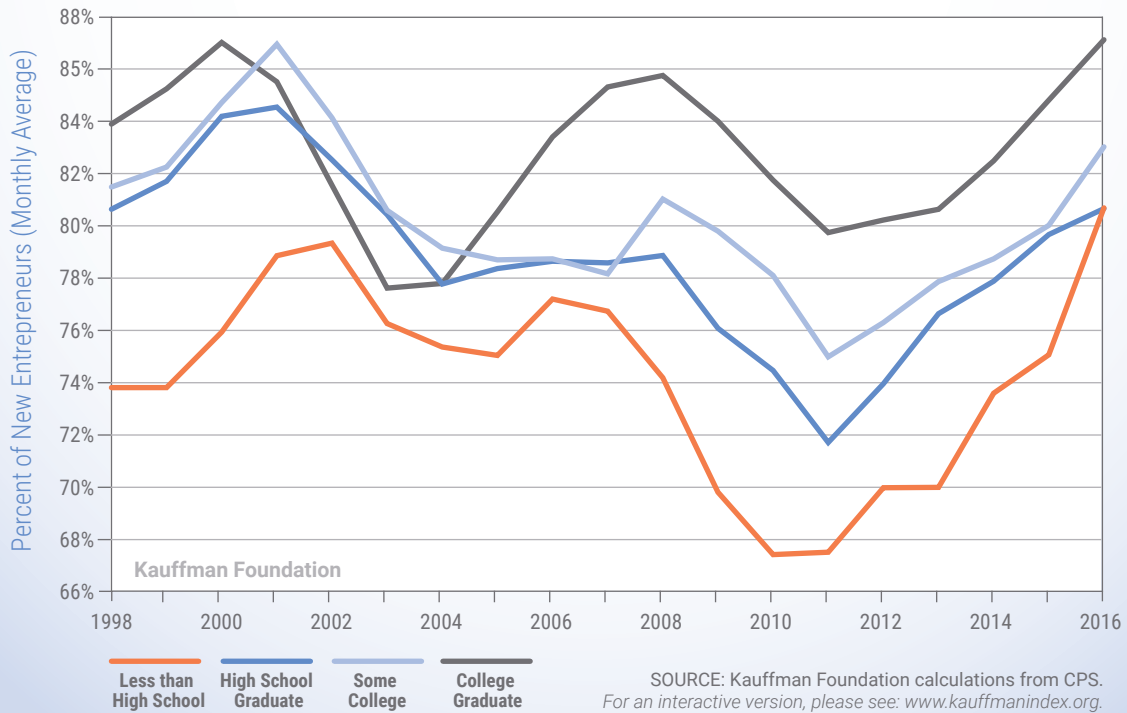
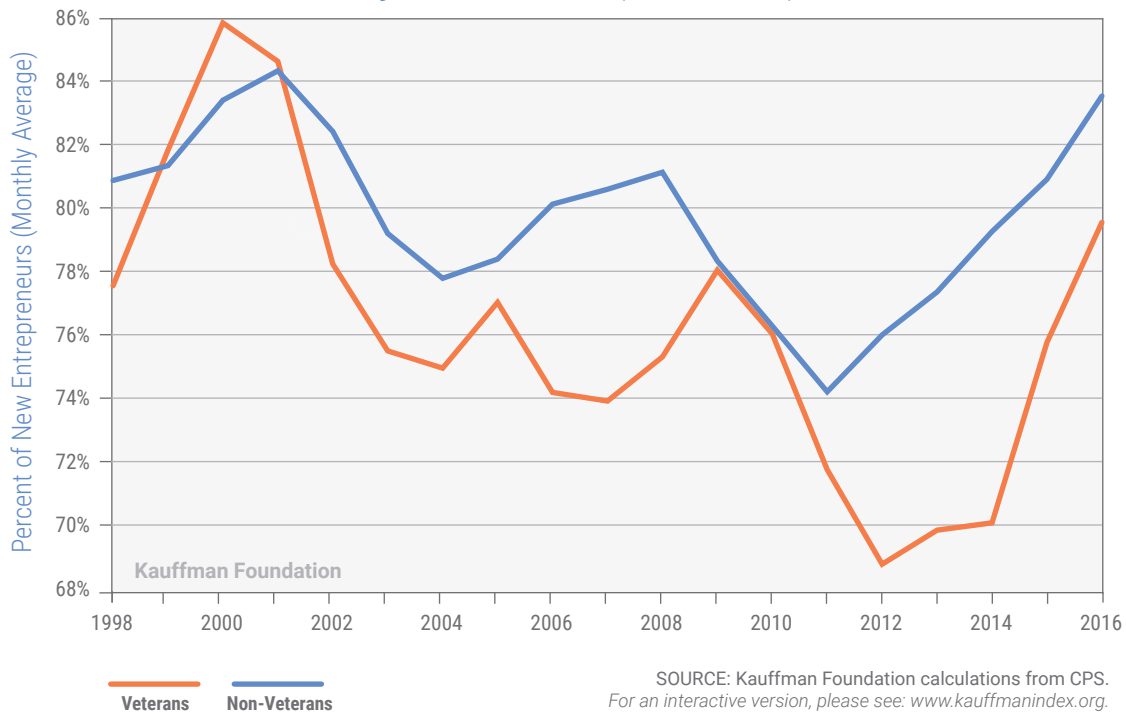


Figure 7B
Opportunity Share of New Entrepreneurs (Three-Year Moving Average)
by Veteran Status (1998–2016)



National Trends in Startup Density

The Startup Density component of the Kauffman Index measures the number of startups per 1,000 employer businesses. Here, we define startups as firms that are less than one year old and employing at least one person. This is a yearly measure calculated from the Bureau of Labor Statistics BDS.

Because the BDS data has a lag of about two years (i.e., the latest year with data available is 2014), we created an estimate of startup density for 2015 and 2016 using data from the Business Employment Dynamics (BED) available through the Bureau of Labor Statistics. For more information on how we created the estimates, including expected errors, please see the Methodology section.

We present this indicator going back from 1977 to 2016. This measure differs from the Rate of New Entrepreneurs in two key ways: 1) the Rate of New Entrepreneurs is a measure based on individuals—the entrepreneurs themselves. As such, it tracks individuals starting new businesses rather than tracking new businesses. 2) It is a very early and broad measure of

Startup Activity, including all entrepreneurs, regardless of how many people their businesses employ, if any, and it includes self-employed entrepreneurs. Startup Density only includes businesses employing at least one person—thus being a slightly more mature measure of Startup Activity.

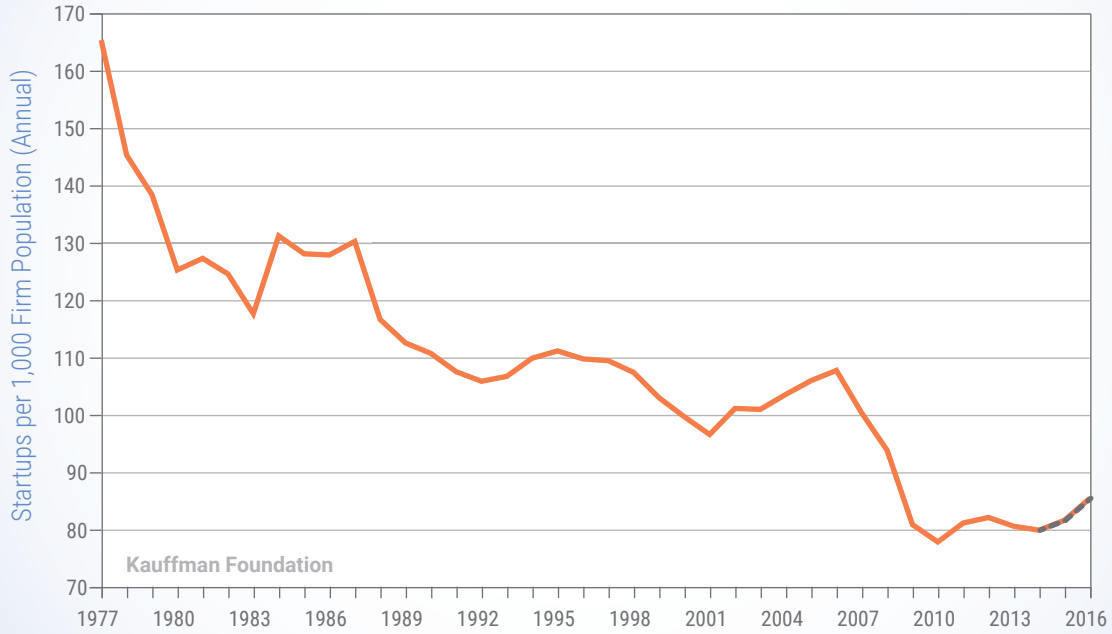
Both researchers and entrepreneurs have suggested density as a key indicator of vibrancy in entrepreneurial ecosystems, and there is high variation on this indicator across metropolitan areas in the United States. (Stangler and Bell-Masterson 2015 and Feld 2012).

The Startup Density was an estimated 85.4 for 2016, which represents approximately 448,000 new employer businesses created that year. The Startup Density increased from 81.6 startups per 1,000 employer businesses to 85.4 from 2015 to 2016.

Startup density in the United States overall has been stuck roughly 20 percent lower than pre-Great Recession levels for the last few years. Moreover, when compared to the levels in the 1980s, 1990s, and early 2000s, Startup Density is in a long-term decline.



Figure 1C
Startup Density (1977–2016)



SOURCE: Kauffman Foundation calculations from BDS. Yearly Measure.
For an interactive version, please see: www.kauffmanindex.org.

Appendix: National Data, Entrepreneurial Demographic Profiles, and Charts

NATIONAL PROFILE

Rate of New Entrepreneurs

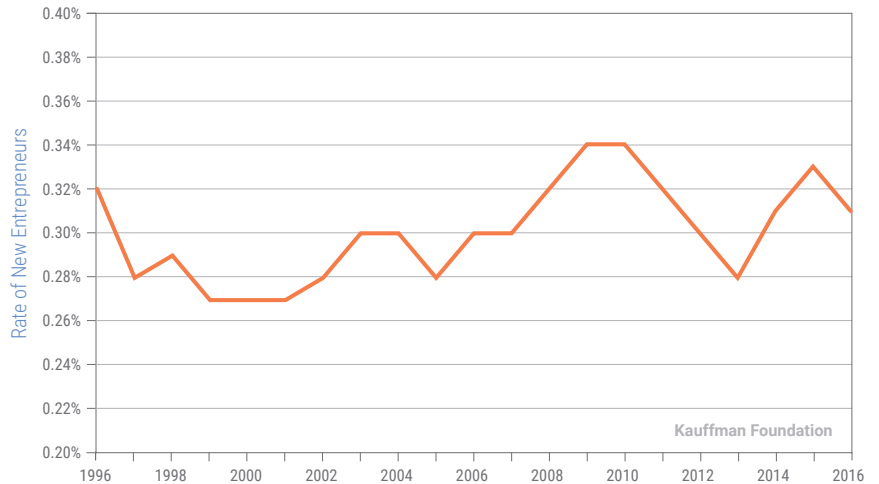
2015 COMPONENT **2016 COMPONENT**

0.33% **0.31%**

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Kauffman Foundation calculations from CPS. Yearly measure.

Rate of New Entrepreneurs (1996–2016)



Opportunity Share of New Entrepreneurs

2015 COMPONENT **2016 COMPONENT**

84.01% **86.25%**

Proxy indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Kauffman Foundation calculations from CPS. Yearly measure.

Opportunity Share of New Entrepreneurs (1996–2016)



Startup Density

2015 COMPONENT **2016 COMPONENT**

81.6 **85.4**

Number of startup firms per 1,000 firm population. Startup businesses here are defined as firms less than one year old employing at least one person besides the owner.

Kauffman Foundation calculations from CPS. Yearly measure.

Startup Density (1977–2016)

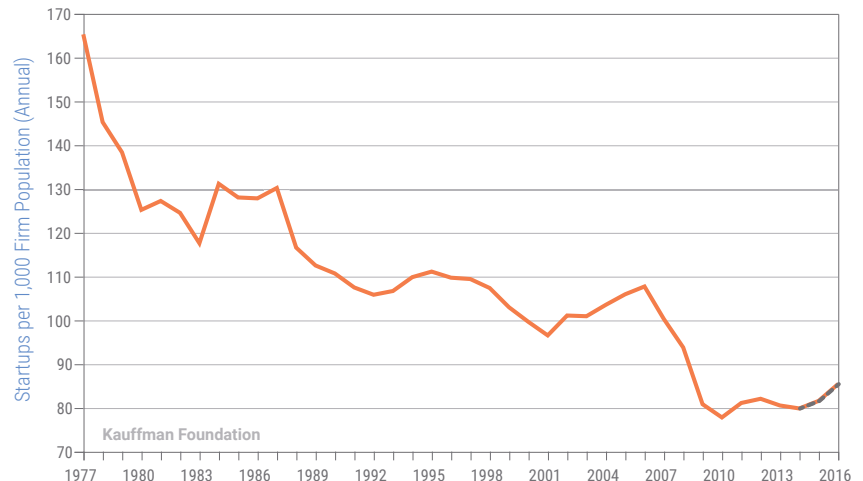
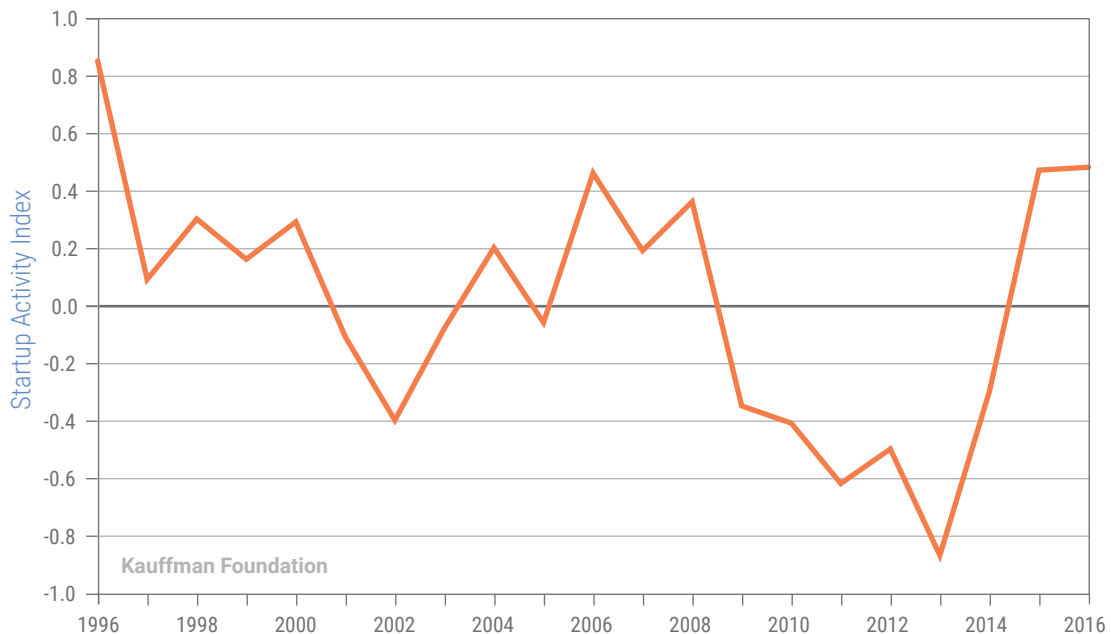


TABLE 1
Startup Activity Index (1996–2016)

		Startup Index Component Measures					
		Rate of New Entrepreneurs		Opportunity Share of New Entrepreneurs		Startup Density	
Year	Startup Activity Index	Rate	N	Share	N	Rate	Firm Population
1996	0.85	0.32%	529,228	81.11%	1692	109.7	4,690,476
1997	0.09	0.28%	531,337	79.54%	1570	109.4	4,752,255
1998	0.30	0.29%	532,543	80.84%	1631	107.3	4,796,229
1999	0.16	0.27%	532,231	83.92%	1467	102.9	4,824,483
2000	0.29	0.27%	532,382	86.43%	1537	99.6	4,836,580
2001	-0.11	0.27%	561,573	82.99%	1507	96.5	4,881,589
2002	-0.40	0.28%	624,303	76.84%	1747	101.1	4,908,710
2003	-0.08	0.30%	614,589	77.09%	1854	100.9	4,963,077
2004	0.20	0.30%	603,171	79.27%	1833	103.5	5,039,479
2005	-0.06	0.28%	598,177	79.07%	1767	105.9	5,139,412
2006	0.46	0.30%	592,917	80.79%	1790	107.7	5,179,788
2007	0.19	0.30%	585,487	80.16%	1738	100.3	5,240,019
2008	0.36	0.32%	585,677	80.74%	1786	93.8	5,200,065
2009	-0.35	0.34%	591,699	73.84%	1937	80.8	5,027,603
2010	-0.41	0.34%	593,271	74.16%	1920	77.8	4,953,425
2011	-0.62	0.32%	586,146	74.10%	1825	81.1	4,912,258
2012	-0.50	0.30%	580,953	78.39%	1780	82.1	4,979,450
2013	-0.87	0.28%	572,600	78.20%	1609	80.5	5,022,874
2014	-0.30	0.31%	569,101	79.57%	1734	79.9	5,058,018
2015	0.47	0.33%	552,887	84.01%	1828	81.6	5,143,184
2016	0.48	0.31%	548,587	86.25%	1686	85.4	5,253,580

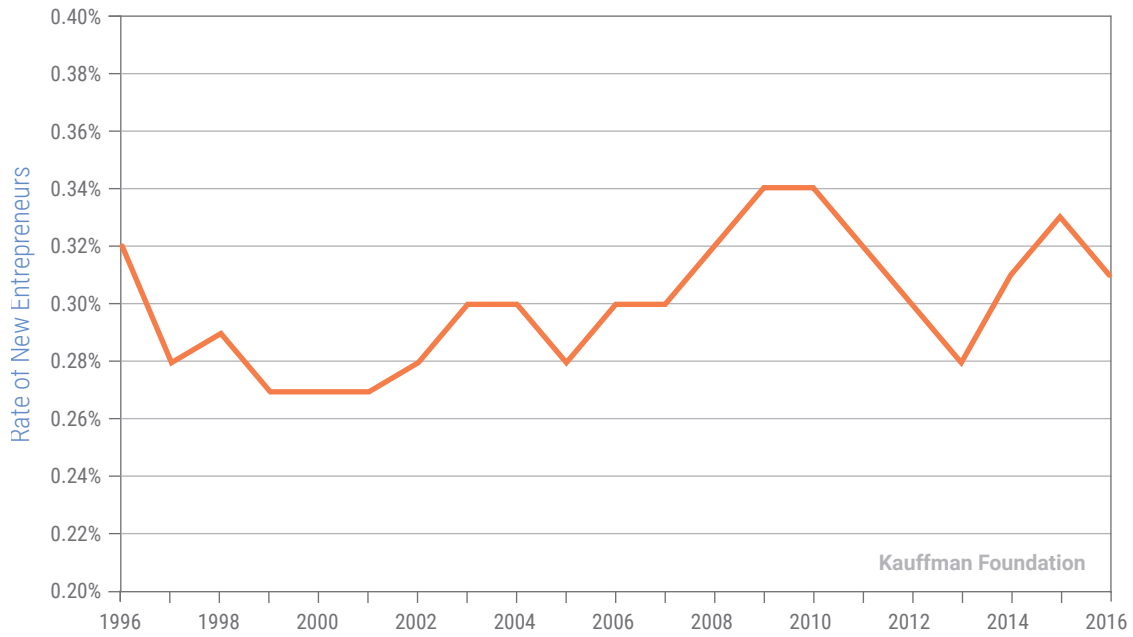
Notes: (1) Estimates calculated by authors using the Current Population Survey, the Business Dynamics Statistics and population data from the Bureau of Economic Analysis. (2) The Rate of New Entrepreneurs is the percentage of individuals (ages twenty to sixty-four) who do not own a business in the first survey month that start a business in the following month with fifteen or more hours worked. (3) All observations with allocated labor force status, class of worker, and hours worked variables are excluded.

Figure 1
Startup Activity Index (1996–2016)



SOURCE: Kauffman Index of Startup Activity, calculations from CPS and BDS.
For an interactive version, please see: www.kauffmanindex.org.

Figure 1A
Rate of New Entrepreneurs (1996–2016)



SOURCE: Kauffman Foundation calculations from CPS. For an interactive version, please see: www.kauffmanindex.org.

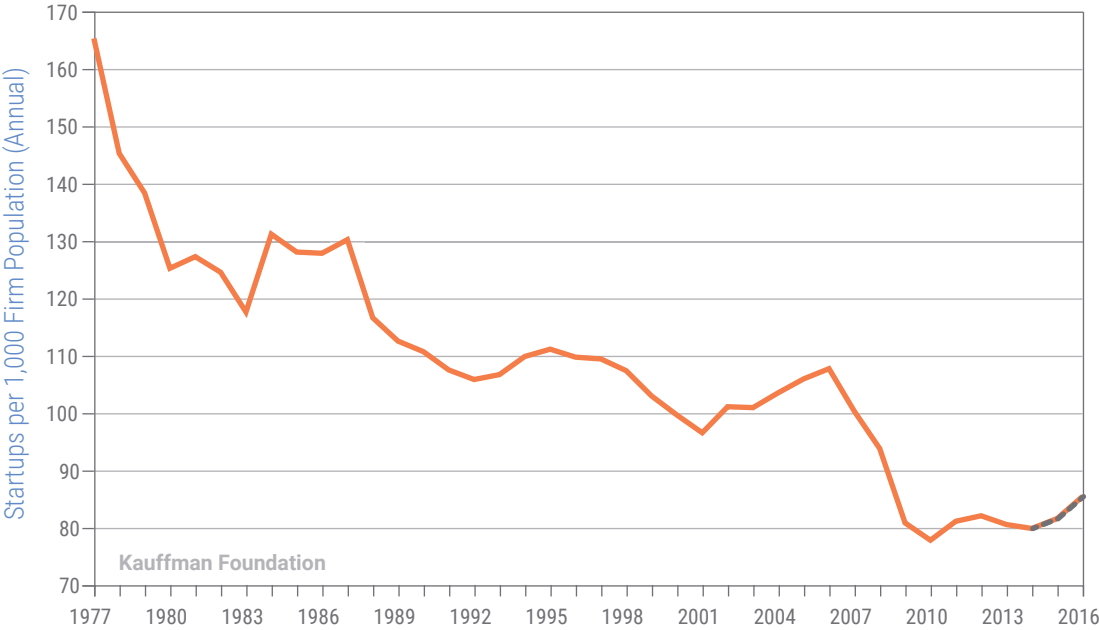
Figure 1B
Opportunity Share of New Entrepreneurs (1996–2016)



SOURCE: Kauffman Foundation calculations from CPS. For an interactive version, please see: www.kauffmanindex.org.



Figure 1C
Startup Density (1977–2016)



SOURCE: Kauffman Foundation calculations from BDS. Yearly Measure.
For an interactive version, please see: www.kauffmanindex.org.

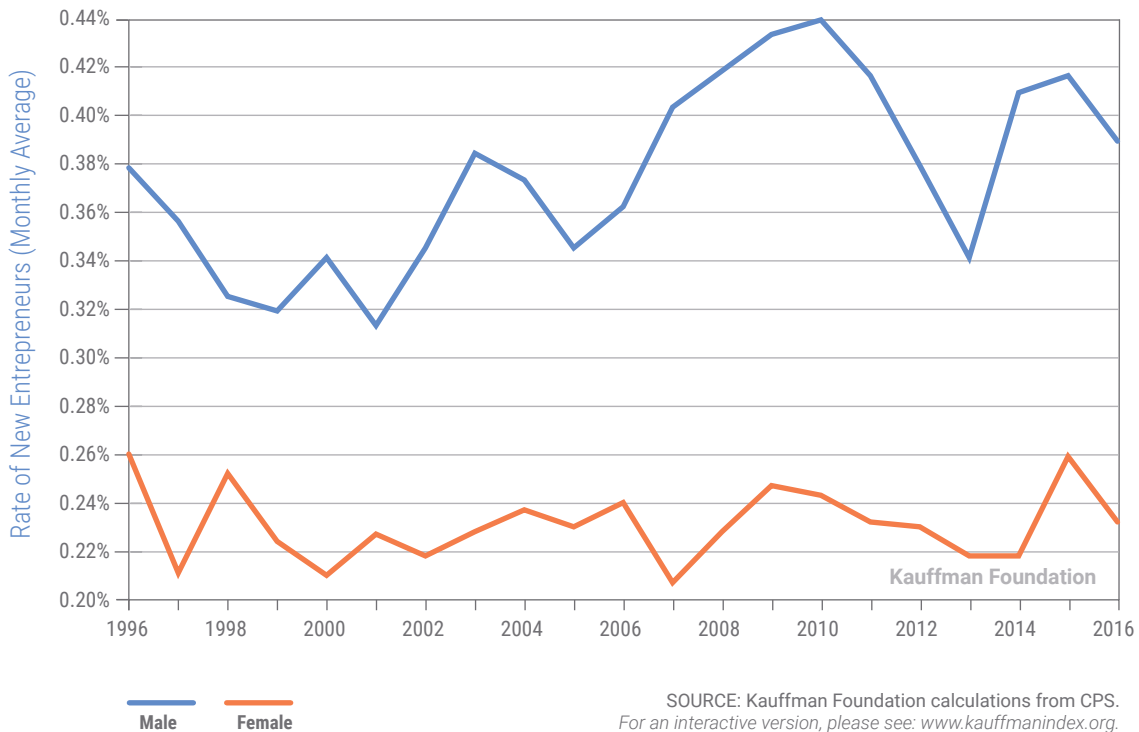


TABLE 2
Rate of New Entrepreneurs by Gender (1996–2016)

Year	Male		Female		Total	
	Rate of New Entrepreneurs	Sample Size	Rate of New Entrepreneurs	Sample Size	Rate of New Entrepreneurs	Sample Size
1996	0.38%	242,558	0.26%	286,670	0.32%	529,228
1997	0.36%	244,856	0.21%	286,481	0.28%	531,337
1998	0.32%	245,941	0.25%	286,602	0.29%	532,543
1999	0.32%	245,815	0.22%	286,416	0.27%	532,231
2000	0.34%	247,027	0.21%	285,355	0.27%	532,382
2001	0.31%	260,936	0.23%	300,637	0.27%	561,573
2002	0.35%	289,130	0.22%	335,173	0.28%	624,303
2003	0.38%	284,487	0.23%	330,102	0.30%	614,589
2004	0.37%	279,600	0.24%	323,571	0.30%	603,171
2005	0.35%	277,131	0.23%	321,046	0.28%	598,177
2006	0.36%	275,538	0.24%	317,379	0.30%	592,917
2007	0.40%	271,413	0.21%	314,074	0.30%	585,487
2008	0.42%	272,789	0.23%	312,888	0.32%	585,677
2009	0.43%	276,445	0.25%	315,254	0.34%	591,699
2010	0.44%	277,387	0.24%	315,884	0.34%	593,271
2011	0.42%	273,887	0.23%	312,259	0.32%	586,146
2012	0.38%	272,246	0.23%	308,707	0.30%	580,953
2013	0.34%	268,540	0.22%	304,060	0.28%	572,600
2014	0.41%	266,891	0.22%	302,210	0.31%	569,101
2015	0.42%	259,471	0.26%	293,416	0.33%	552,887
2016	0.39%	257,057	0.23%	291,530	0.31%	548,587

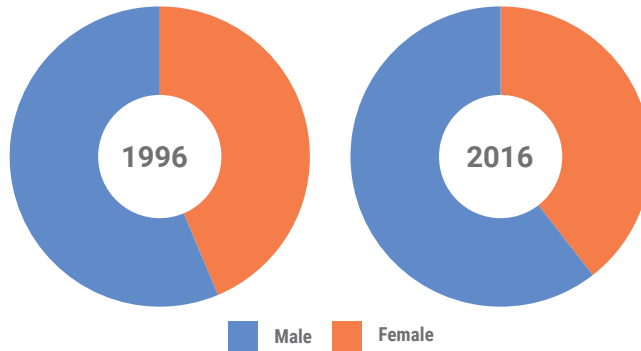
Notes: (1) Estimates calculated by authors using the Current Population Survey. (2) The entrepreneurship index is the percent of individuals (ages twenty to sixty-four) who do not own a business in the first survey month that start a business in the following month with fifteen or more hours worked. (3) All observations with allocated labor force status, class of worker, and hours worked variables are excluded.

Figure 2
Rate of New Entrepreneurs by Gender (1996–2016)



SOURCE: Kauffman Foundation calculations from CPS.
For an interactive version, please see: www.kauffmanindex.org.

Figure 2A
**Changes in Composition of
 New Entrepreneurs by Gender (1996, 2016)**



SOURCE: Kauffman Foundation calculations from CPS. Kauffman Foundation

Gender	1996	2016
Male	56.33%	60.51%
Female	43.67%	39.49%

Figure 2B
**Opportunity Share of New Entrepreneurs (Three-Year Moving Average)
 by Gender (1998–2016)**

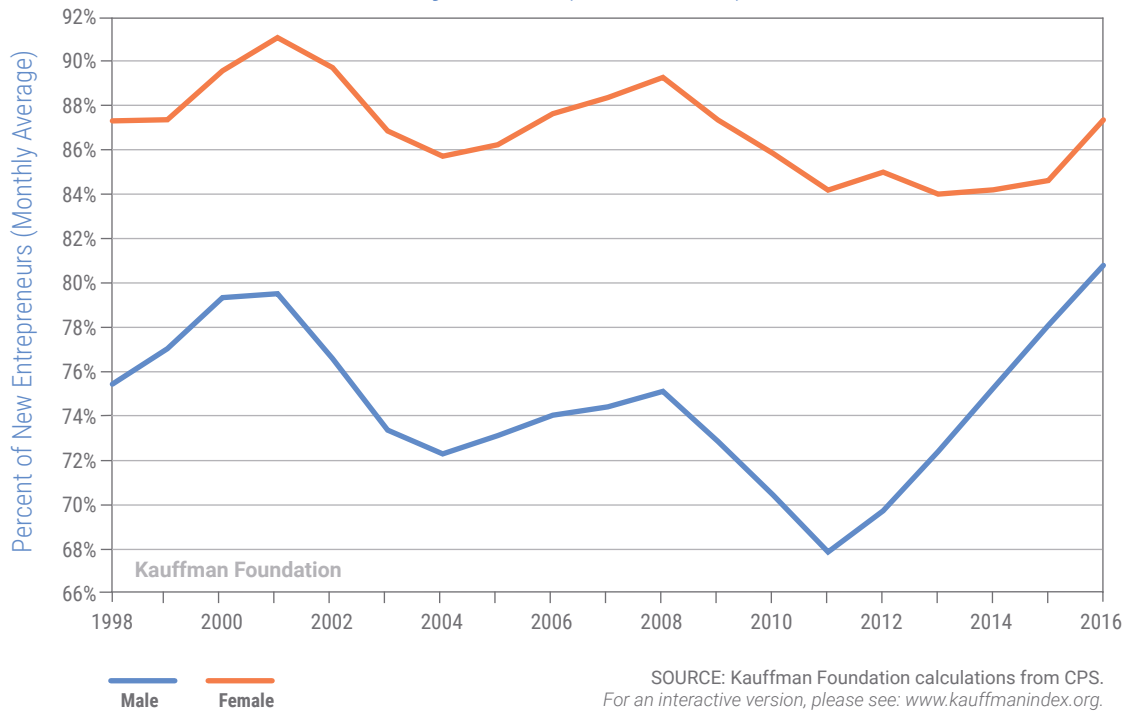
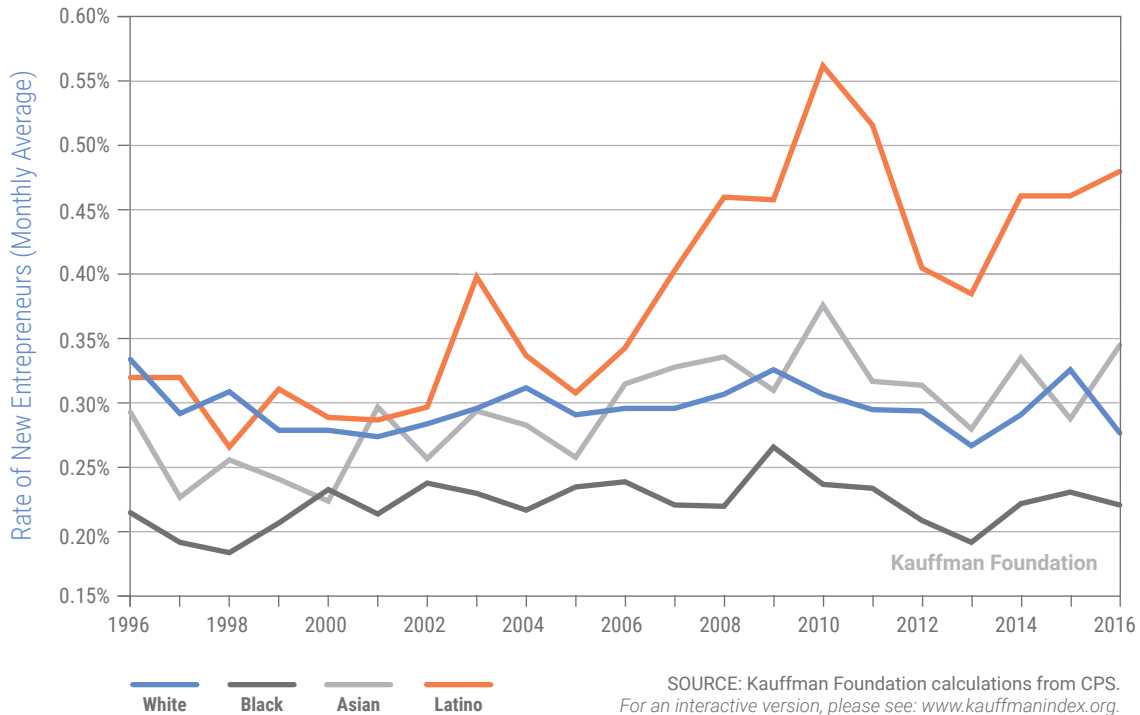


TABLE 3
Rate of New Entrepreneurs by Race (1996–2016)

Year	White		Black		Latino		Asian		Total	
	Rate of New Entrepreneurs	Sample Size	Rate of New Entrepreneurs	Sample Size	Rate of New Entrepreneurs	Sample Size	Rate of New Entrepreneurs	Sample Size	Rate of New Entrepreneurs	Sample Size
1996	0.33%	403,882	0.21%	54,582	0.32%	43,663	0.29%	20,344	0.32%	529,228
1997	0.29%	402,742	0.19%	55,372	0.32%	45,460	0.23%	20,729	0.28%	531,337
1998	0.31%	402,851	0.18%	54,726	0.27%	46,886	0.25%	21,137	0.29%	532,543
1999	0.28%	401,523	0.21%	54,183	0.31%	48,682	0.24%	21,139	0.27%	532,231
2000	0.28%	395,793	0.23%	55,089	0.29%	52,274	0.22%	21,892	0.27%	532,382
2001	0.27%	418,654	0.21%	57,667	0.29%	53,780	0.30%	23,603	0.27%	561,573
2002	0.28%	469,788	0.24%	61,598	0.30%	57,638	0.26%	26,534	0.28%	624,303
2003	0.30%	456,940	0.23%	58,699	0.40%	59,441	0.29%	23,889	0.30%	614,589
2004	0.31%	444,473	0.22%	56,789	0.34%	59,238	0.28%	24,310	0.30%	603,171
2005	0.29%	438,870	0.23%	55,069	0.31%	60,526	0.26%	25,541	0.28%	598,177
2006	0.30%	429,197	0.24%	55,675	0.34%	64,085	0.31%	26,555	0.30%	592,917
2007	0.30%	422,208	0.22%	56,392	0.40%	63,617	0.33%	26,882	0.30%	585,487
2008	0.31%	420,349	0.22%	56,405	0.46%	64,786	0.34%	28,066	0.32%	585,677
2009	0.33%	423,378	0.27%	57,564	0.46%	65,514	0.31%	28,961	0.34%	591,699
2010	0.31%	418,536	0.24%	60,550	0.56%	67,853	0.37%	30,243	0.34%	593,271
2011	0.29%	411,118	0.23%	59,939	0.52%	67,695	0.32%	31,456	0.32%	586,146
2012	0.29%	405,044	0.21%	58,800	0.40%	68,637	0.31%	32,688	0.30%	580,953
2013	0.27%	396,399	0.19%	58,700	0.38%	69,291	0.28%	32,693	0.28%	572,600
2014	0.29%	390,776	0.22%	59,010	0.46%	70,034	0.33%	33,114	0.31%	569,101
2015	0.32%	375,378	0.23%	60,147	0.46%	68,384	0.29%	32,669	0.33%	552,887
2016	0.28%	369,856	0.22%	59,051	0.48%	70,171	0.34%	33,337	0.31%	548,587

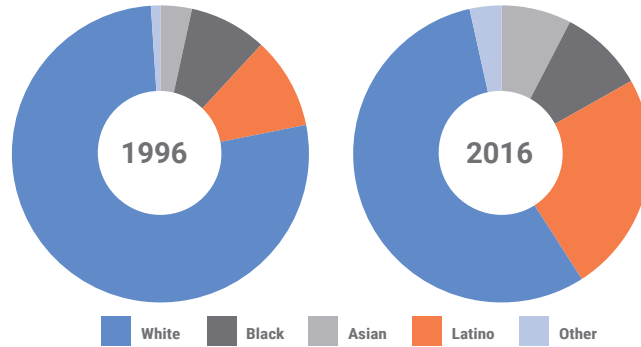
Notes: (1) Estimates calculated by authors using the Current Population Survey. (2) The entrepreneurship index is the percent of individuals (ages twenty to sixty-four) who do not own a business in the first survey month that start a business in the following month with fifteen or more hours worked. (3) Race and Spanish codes changed in 2003. Estimates for 2003 only include individuals reporting one race. (4) All observations with allocated labor force status, class of worker, and hours worked variables are excluded.

Figure 3
Rate of New Entrepreneurs by Race (1996–2016)



SOURCE: Kauffman Foundation calculations from CPS.
For an interactive version, please see: www.kauffmanindex.org.

Figure 3A
**Changes in Composition of
 New Entrepreneurs by Race (1996, 2016)**



SOURCE: Kauffman Foundation calculations from CPS. Kauffman Foundation

Race	1996	2016
White	77.12%	55.59%
Black	8.43%	9.24%
Asian	3.42%	7.59%
Latino	10.01%	24.12%
Other	1.02%	3.46%

Figure 3B
**Opportunity Share of New Entrepreneurs (Three-Year Moving Average)
 by Race (1998–2016)**

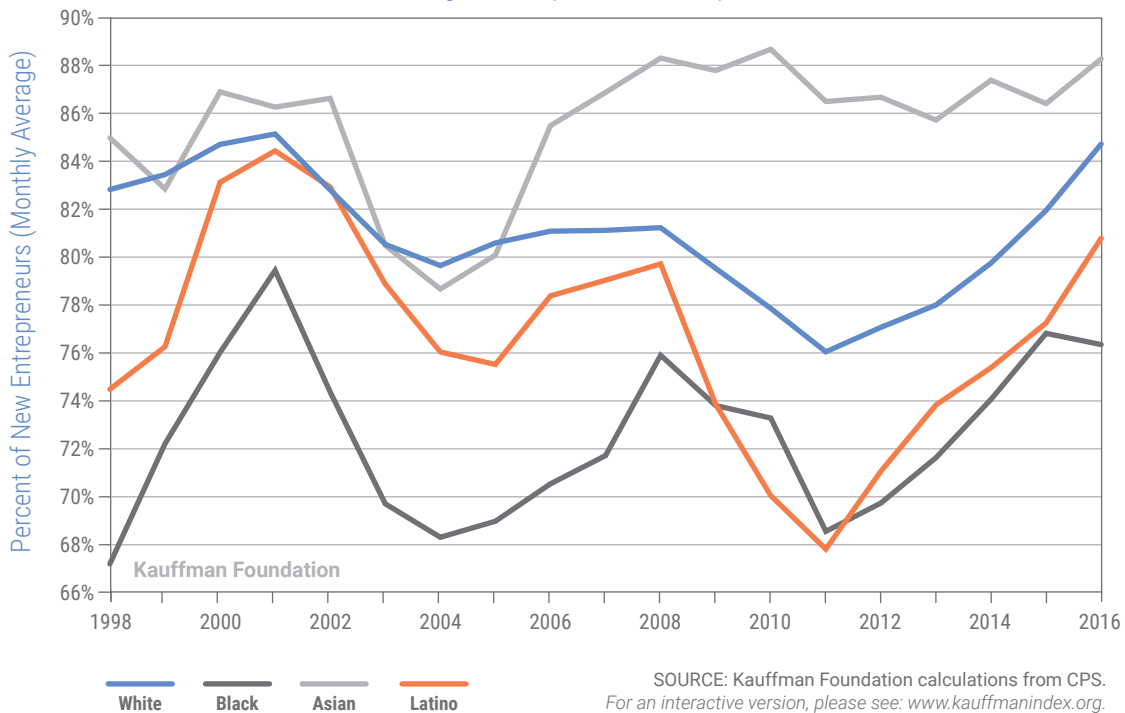
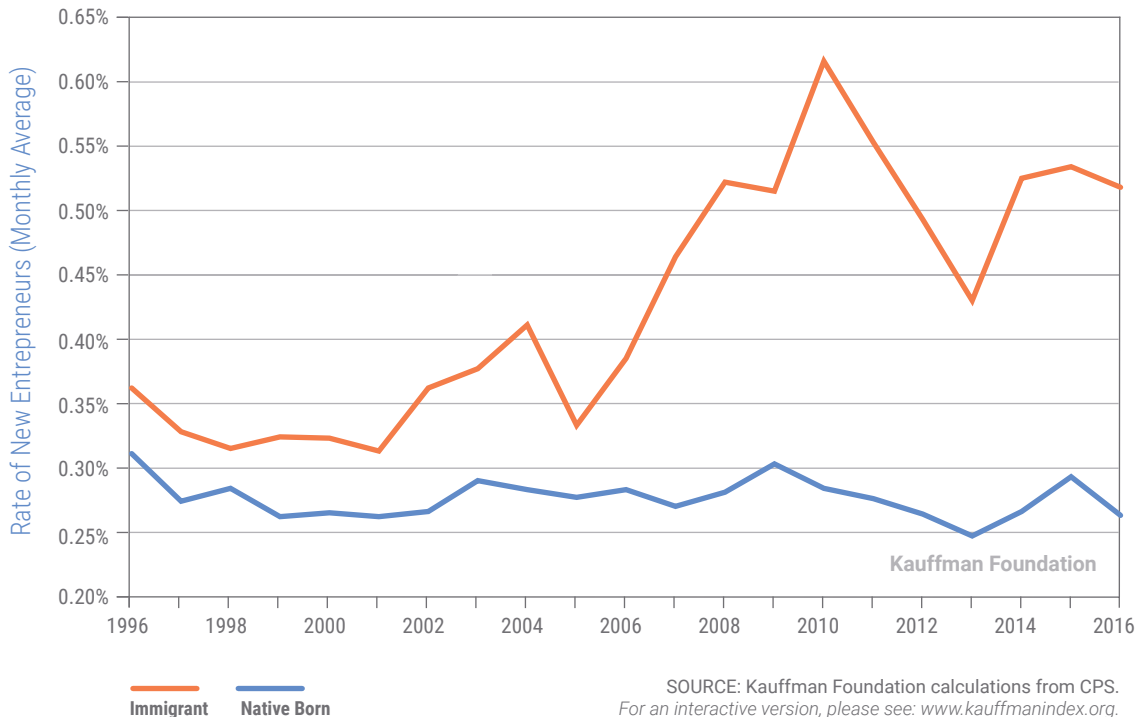


TABLE 4
Rate of New Entrepreneurs by Nativity (1996–2016)

Year	Native-Born		Immigrant		Total	
	Rate of New Entrepreneurs	Sample Size	Rate of New Entrepreneurs	Sample Size	Rate of New Entrepreneurs	Sample Size
1996	0.31%	473,602	0.36%	55626	0.32%	529,228
1997	0.27%	473,536	0.33%	57801	0.28%	531,337
1998	0.28%	472,728	0.31%	59815	0.29%	532,543
1999	0.26%	471,772	0.32%	60459	0.27%	532,231
2000	0.26%	467,393	0.32%	64989	0.27%	532,382
2001	0.26%	493,029	0.31%	68544	0.27%	561,573
2002	0.26%	550,023	0.36%	74280	0.28%	624,303
2003	0.29%	540,397	0.38%	74192	0.30%	614,589
2004	0.28%	529,234	0.41%	73937	0.30%	603,171
2005	0.28%	523,221	0.33%	74956	0.28%	598,177
2006	0.28%	514,691	0.38%	78226	0.30%	592,917
2007	0.27%	507,469	0.46%	78018	0.30%	585,487
2008	0.28%	507,088	0.52%	78589	0.32%	585,677
2009	0.30%	511,798	0.51%	79901	0.34%	591,699
2010	0.28%	510,631	0.62%	82640	0.34%	593,271
2011	0.27%	503,500	0.55%	82646	0.32%	586,146
2012	0.26%	498,127	0.49%	82826	0.30%	580,953
2013	0.25%	491,045	0.43%	81555	0.28%	572,600
2014	0.27%	487,845	0.52%	81256	0.31%	569,101
2015	0.29%	474,013	0.53%	78874	0.33%	552,887
2016	0.26%	469,116	0.52%	79471	0.31%	548,587

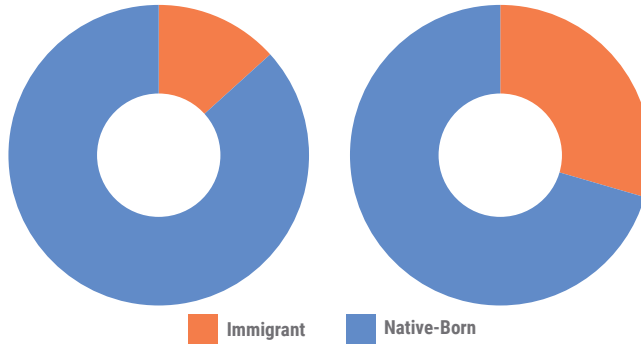
Notes: (1) Estimates calculated by authors using the Current Population Survey. (2) The entrepreneurship index is the percent of individuals (ages twenty to sixty-four) who do not own a business in the first survey month that start a business in the following month with fifteen or more hours worked. (3) All observations with allocated labor force status, class of worker, and hours worked variables are excluded.

Figure 4
Rate of New Entrepreneurs by Nativity (1996–2016)



SOURCE: Kauffman Foundation calculations from CPS.
For an interactive version, please see: www.kauffmanindex.org.

Figure 4A
**Changes in Composition of
 New Entrepreneurs by Nativity (1996, 2016)**



SOURCE: Kauffman Foundation calculations from CPS. **Kauffman Foundation**

Nativity	1996	2016
Immigrant	13.29%	29.50%
Native-Born	86.71%	70.50%

Figure 4B
**Opportunity Share of New Entrepreneurs (Three-Year Moving Average)
 by Nativity (1998–2016)**

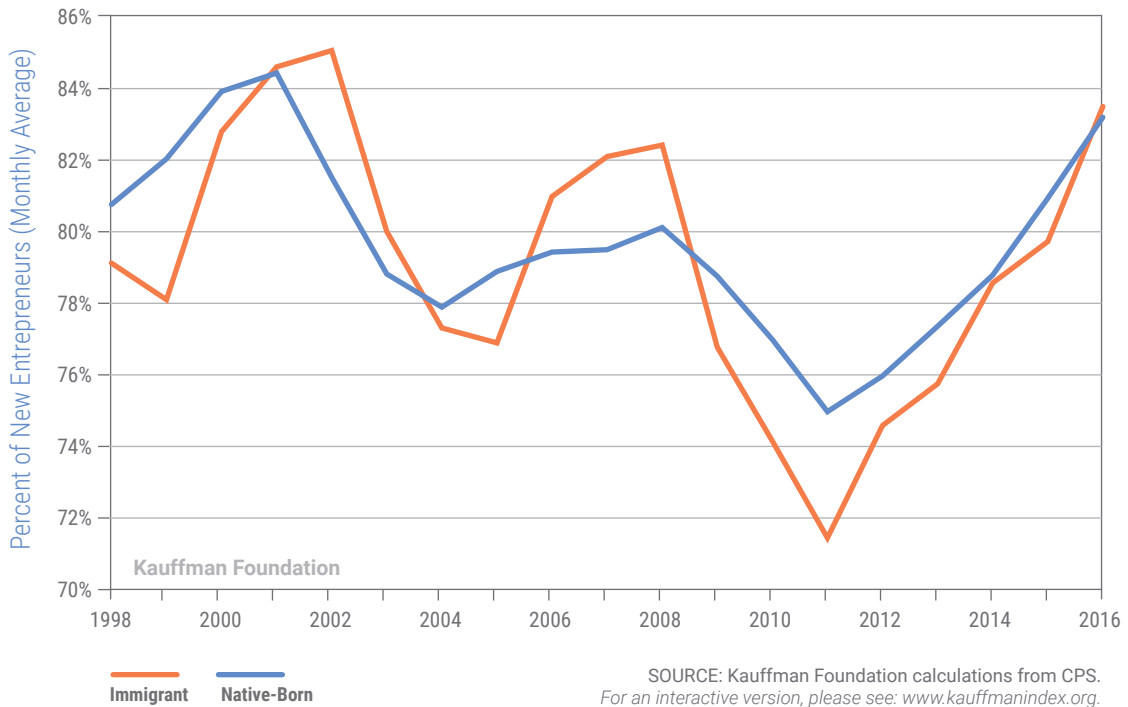
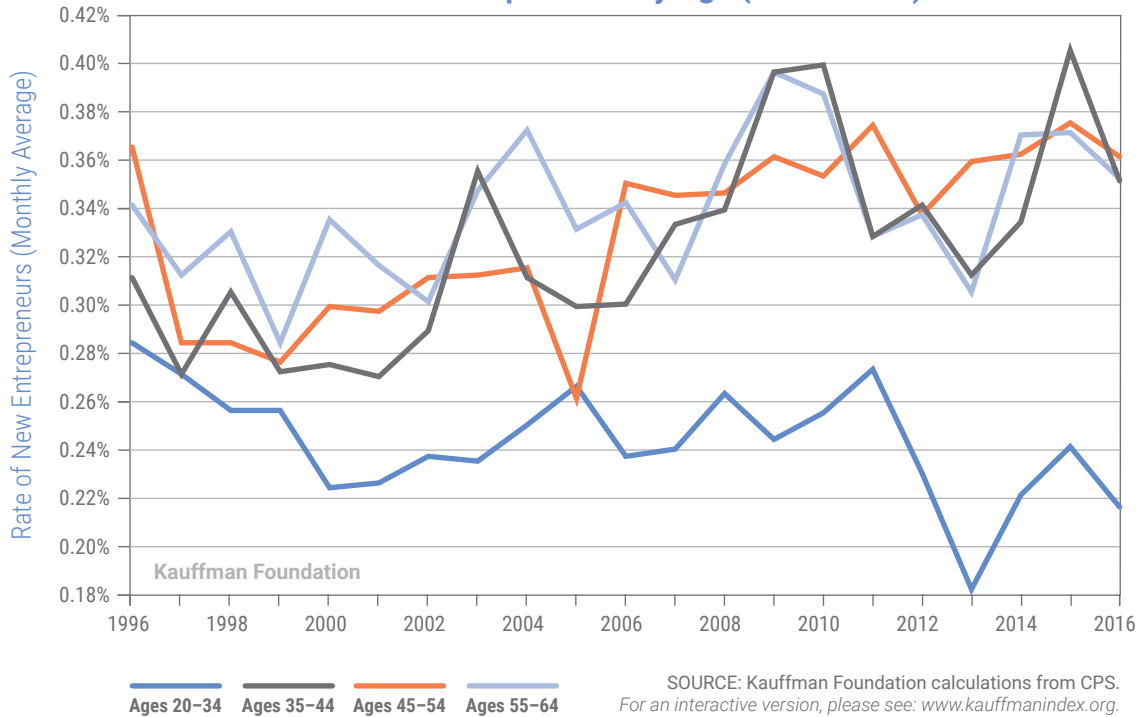


TABLE 5
Rate of New Entrepreneurs by Age (1996–2016)

Year	Ages 20–34		Ages 35–44		Ages 45–54		Ages 55–64		Total	
	Rate of New Entrepreneurs	Sample Size	Rate of New Entrepreneurs	Sample Size	Rate of New Entrepreneurs	Sample Size	Rate of New Entrepreneurs	Sample Size	Rate of New Entrepreneurs	Sample Size
1996	0.28%	192,739	0.31%	147,675	0.36%	112,694	0.34%	76,120	0.32%	529,228
1997	0.27%	190,207	0.27%	149,052	0.28%	115,190	0.31%	76,888	0.28%	531,337
1998	0.26%	186,045	0.31%	147,940	0.28%	119,157	0.33%	79,401	0.29%	532,543
1999	0.26%	180,272	0.27%	146,690	0.28%	123,372	0.28%	81,897	0.27%	532,231
2000	0.22%	179,317	0.27%	145,298	0.30%	125,782	0.34%	81,985	0.27%	532,382
2001	0.23%	185,723	0.27%	151,137	0.30%	136,921	0.32%	87,792	0.27%	561,573
2002	0.24%	203,885	0.29%	165,523	0.31%	153,253	0.30%	101,642	0.28%	624,303
2003	0.23%	198,319	0.36%	158,558	0.31%	152,456	0.35%	105,256	0.30%	614,589
2004	0.25%	193,789	0.31%	150,627	0.31%	150,797	0.37%	107,958	0.30%	603,171
2005	0.27%	190,816	0.30%	148,231	0.26%	149,204	0.33%	109,926	0.28%	598,177
2006	0.24%	187,554	0.30%	143,677	0.35%	149,395	0.34%	112,291	0.30%	592,917
2007	0.24%	184,293	0.33%	138,172	0.35%	147,129	0.31%	115,893	0.30%	585,487
2008	0.26%	184,773	0.34%	134,605	0.35%	147,508	0.36%	118,791	0.32%	585,677
2009	0.24%	187,073	0.40%	133,289	0.36%	149,073	0.40%	122,264	0.34%	591,699
2010	0.26%	190,232	0.40%	130,670	0.35%	147,479	0.39%	124,890	0.34%	593,271
2011	0.27%	188,276	0.33%	127,160	0.37%	142,498	0.33%	128,212	0.32%	586,146
2012	0.23%	186,889	0.34%	125,285	0.34%	139,858	0.34%	128,921	0.30%	580,953
2013	0.18%	183,389	0.31%	122,475	0.36%	136,815	0.31%	129,921	0.28%	572,600
2014	0.22%	183,187	0.33%	121,100	0.36%	133,520	0.37%	131,294	0.31%	569,101
2015	0.24%	178,440	0.40%	117,878	0.37%	127,120	0.37%	129,449	0.33%	552,887
2016	0.22%	176,138	0.35%	116,806	0.36%	124,459	0.35%	131,184	0.31%	548,587

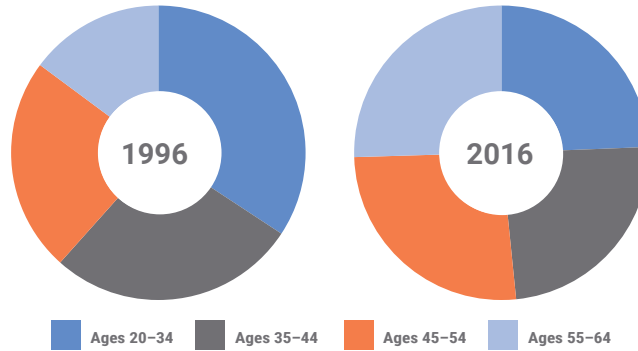
Notes: (1) Estimates calculated by authors using the Current Population Survey. (2) The Rate of New Entrepreneurs is the percent of individuals who do not own a business in the first survey month that start a business in the following month with fifteen or more hours worked. (3) All observations with allocated labor force status, class of worker, and hours worked variables are excluded.

Figure 5
Rate of New Entrepreneurs by Age (1996–2016)



SOURCE: Kauffman Foundation calculations from CPS.
For an interactive version, please see: www.kauffmanindex.org.

Figure 5A
**Changes in Composition of
 New Entrepreneurs by Age (1996, 2016)**



SOURCE: Kauffman Foundation calculations from CPS. Kauffman Foundation

Age	1996	2016
Ages 20-34	34.27%	24.37%
Ages 35-44	27.36%	24.04%
Ages 45-54	23.55%	26.13%
Ages 55-64	14.83%	25.46%

Figure 5B
**Opportunity Share of New Entrepreneurs (Three-Year Moving Average)
 by Age (1998-2016)**

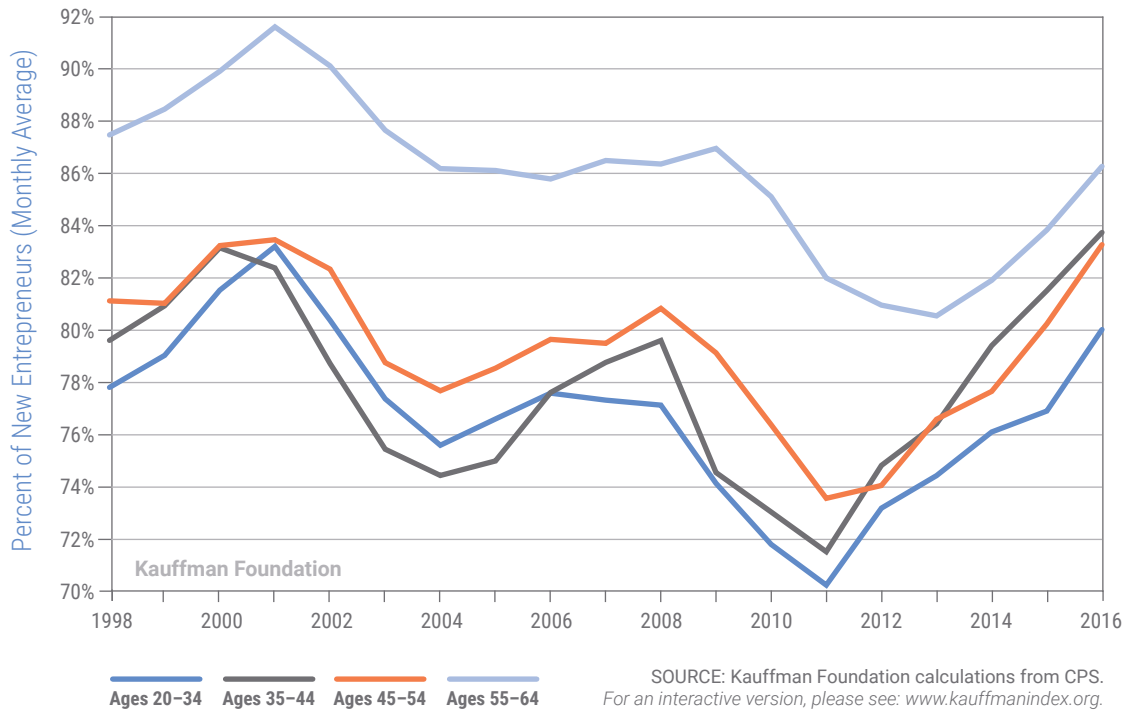


TABLE 6
Rate of New Entrepreneurs by Education (1996–2016)

Year	Less than High School		High School Graduate		Some College		College Graduate		Total (Ages 25–64)	
	Rate of New Entrepreneurs	Sample Size	Rate of New Entrepreneurs	Sample Size	Rate of New Entrepreneurs	Sample Size	Rate of New Entrepreneurs	Sample Size	Rate of New Entrepreneurs	Sample Size
1996	0.39%	63,973	0.31%	161,957	0.33%	125,972	0.31%	120,909	0.33%	472,811
1997	0.35%	62,812	0.27%	162,044	0.31%	126,575	0.26%	123,773	0.29%	475,204
1998	0.33%	61,102	0.30%	160,914	0.30%	126,835	0.29%	128,029	0.30%	476,880
1999	0.29%	58,714	0.29%	158,802	0.29%	128,248	0.26%	131,365	0.28%	477,129
2000	0.35%	57,870	0.29%	155,833	0.28%	129,809	0.26%	132,277	0.29%	475,789
2001	0.31%	59,371	0.26%	162,522	0.27%	138,448	0.31%	142,028	0.28%	502,369
2002	0.35%	63,517	0.29%	179,749	0.27%	154,165	0.31%	161,915	0.29%	559,346
2003	0.44%	61,420	0.31%	175,723	0.32%	151,212	0.29%	161,424	0.32%	549,779
2004	0.39%	60,080	0.29%	170,319	0.30%	149,067	0.33%	160,011	0.32%	539,477
2005	0.35%	59,521	0.28%	166,882	0.31%	147,893	0.29%	160,300	0.30%	534,596
2006	0.38%	58,458	0.29%	163,418	0.33%	147,465	0.30%	160,874	0.31%	530,215
2007	0.42%	55,263	0.30%	159,167	0.28%	146,362	0.33%	163,613	0.32%	524,405
2008	0.46%	53,823	0.35%	157,119	0.30%	147,531	0.30%	166,280	0.33%	524,753
2009	0.49%	53,791	0.38%	158,573	0.30%	149,708	0.34%	168,737	0.36%	530,809
2010	0.59%	53,366	0.34%	157,939	0.31%	149,218	0.33%	170,832	0.36%	531,355
2011	0.57%	51,934	0.33%	154,501	0.31%	147,693	0.29%	171,581	0.34%	525,709
2012	0.52%	49,911	0.34%	149,790	0.28%	147,249	0.28%	173,884	0.32%	520,834
2013	0.48%	48,059	0.28%	146,623	0.27%	144,977	0.28%	174,294	0.30%	513,953
2014	0.48%	47,308	0.34%	145,159	0.27%	143,859	0.32%	174,363	0.33%	510,689
2015	0.50%	47,222	0.35%	138,765	0.33%	139,006	0.33%	171,154	0.35%	496,147
2016	0.56%	45,183	0.32%	137,622	0.31%	137,959	0.28%	172,255	0.33%	493,019

Notes: (1) Estimates calculated by authors using the Current Population Survey. (2) The Rate of New Entrepreneurs is the percent of individuals (ages twenty-five to sixty-four) who do not own a business in the first survey month that start a business in the following month with fifteen or more hours worked. (3) All observations with allocated labor force status, class of worker, and hours worked variables are excluded.

Figure 6
Rate of New Entrepreneurs by Education (1996–2016)

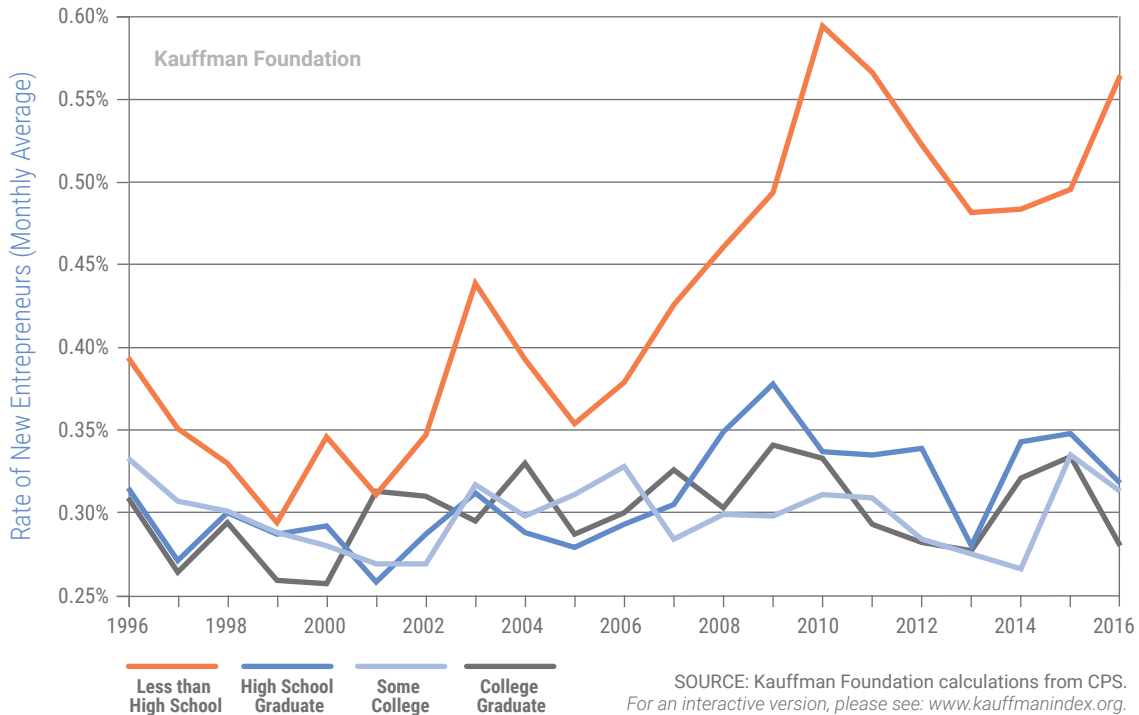
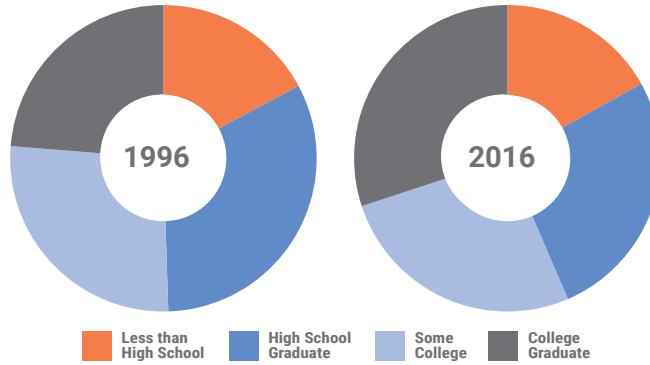


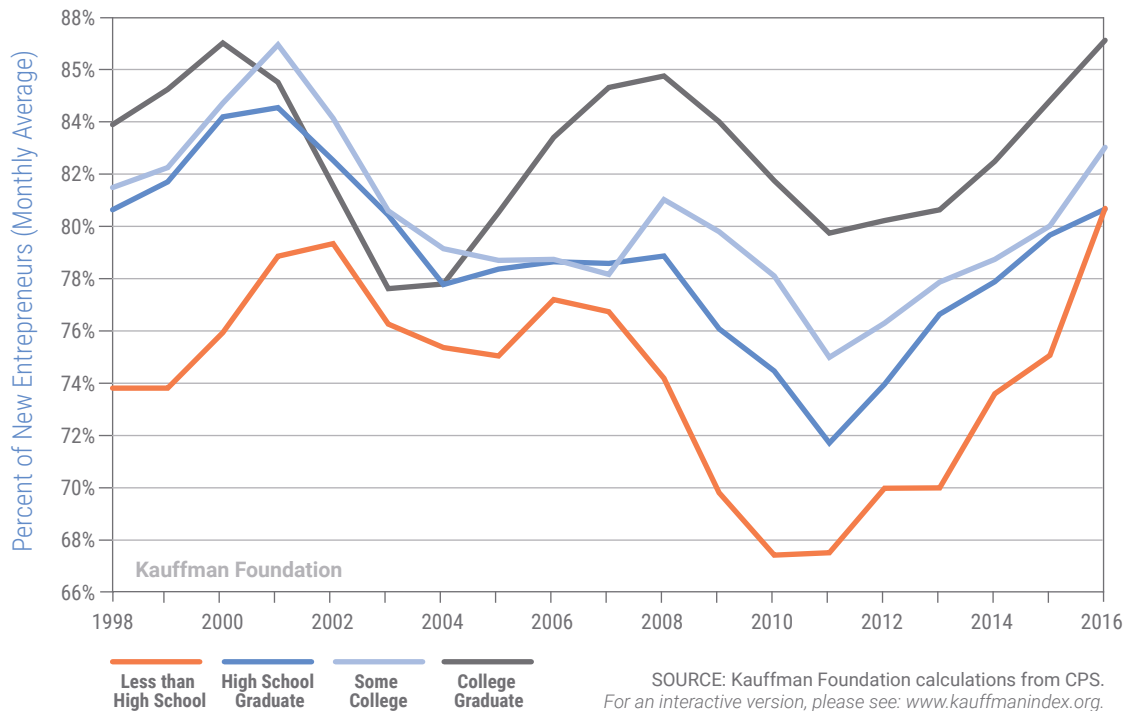
Figure 6A
**Changes in Composition of
 New Entrepreneurs by Education
 (1996, 2016)**



SOURCE: Kauffman Foundation calculations from CPS. Kauffman Foundation

Race	1996	2016
Less than High School	17.16%	16.92%
High School Graduate	32.34%	26.63%
Some College	26.78%	26.40%
College Graduate	23.72%	30.05%

Figure 6B
**Opportunity Share of New Entrepreneurs (Three-Year Moving Average)
 by Education (1998–2016)**



SOURCE: Kauffman Foundation calculations from CPS.
 For an interactive version, please see: www.kauffmanindex.org.

TABLE 7
Rate of New Entrepreneurs by Veteran Status (1996–2016)

Year	Veterans		Non-Veterans		Total	
	Rate of New Entrepreneurs	Sample Size	Rate of New Entrepreneurs	Sample Size	Rate of New Entrepreneurs	Sample Size
1996	0.36%	59,454	0.31%	467,880	0.32%	529,228
1997	0.32%	57,661	0.27%	471,315	0.28%	531,337
1998	0.27%	56,183	0.29%	473,580	0.29%	532,543
1999	0.30%	54,994	0.26%	473,878	0.27%	532,231
2000	0.32%	52,260	0.26%	475,578	0.27%	532,382
2001	0.36%	53,094	0.26%	502,976	0.27%	561,573
2002	0.32%	57,781	0.27%	558,890	0.28%	624,303
2003	0.37%	54,866	0.30%	550,940	0.30%	614,589
2004	0.31%	52,510	0.30%	541,182	0.30%	603,171
2005	0.33%	50,674	0.28%	541,198	0.28%	598,177
2006	0.35%	48,872	0.29%	544,045	0.30%	592,917
2007	0.35%	46,839	0.30%	538,648	0.30%	585,487
2008	0.35%	45,393	0.32%	540,284	0.32%	585,677
2009	0.30%	44,114	0.34%	547,585	0.34%	591,699
2010	0.27%	42,163	0.34%	551,108	0.34%	593,271
2011	0.30%	40,396	0.32%	545,750	0.32%	586,146
2012	0.28%	37,481	0.30%	543,472	0.30%	580,953
2013	0.23%	35,124	0.28%	537,476	0.28%	572,600
2014	0.31%	33,123	0.31%	535,978	0.31%	569,101
2015	0.26%	31,367	0.34%	521,520	0.33%	552,887
2016	0.25%	30,472	0.31%	518,115	0.31%	548,587

Notes: (1) Estimates calculated by authors using the Current Population Survey. (2) The entrepreneurship index is the percent of individuals (ages twenty to sixty-four) who do not own a business in the first survey month that start a business in the following month with fifteen or more hours worked. (3) All observations with allocated labor force status, class of worker, and hours worked variables are excluded. (4) The total sample size is slightly larger than the sum of the veteran and non-veteran sample sizes from 1996 to 2005 because of missing values for veteran status in those years.

Figure 7
Rate of New Entrepreneurs by Veteran Status (1996–2016)

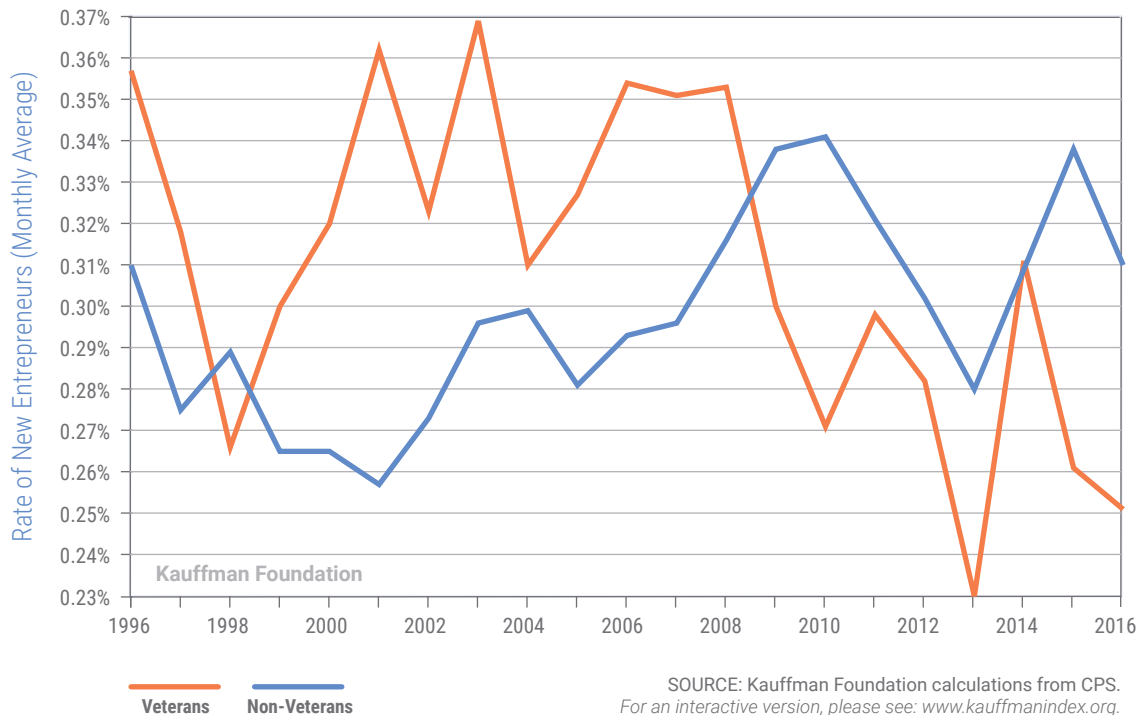
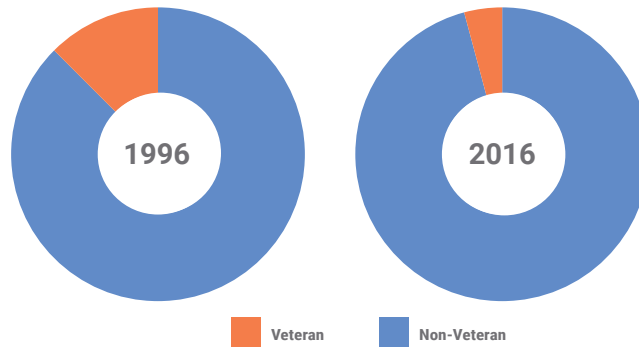


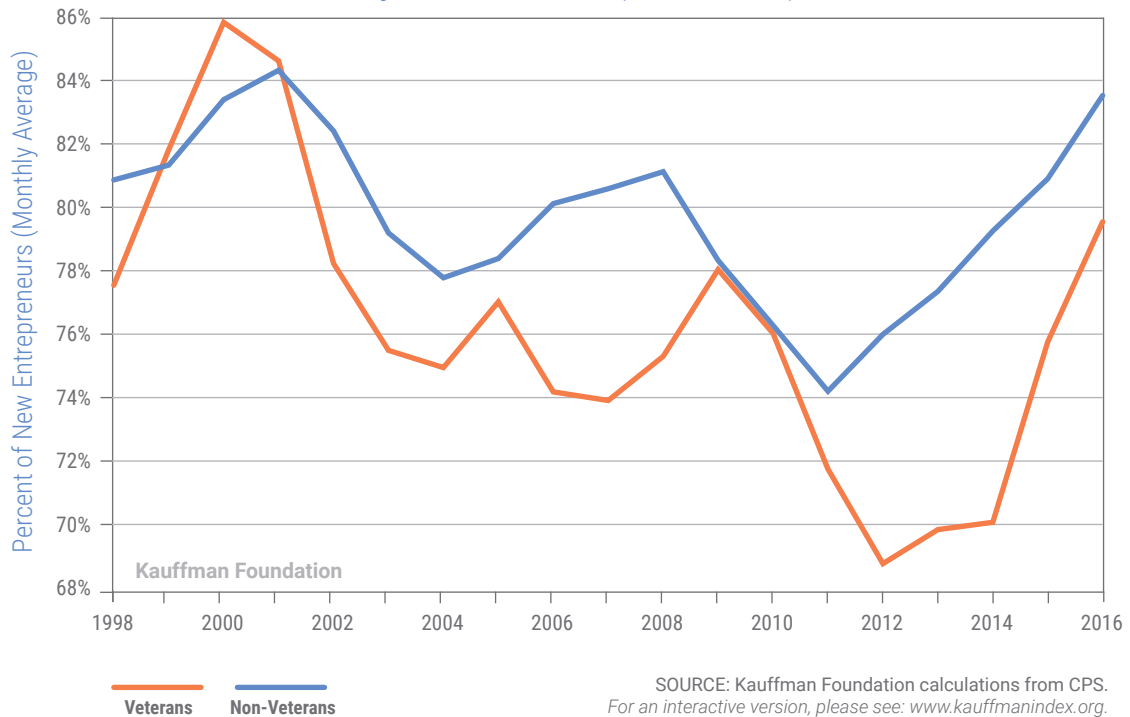
Figure 7A
**Changes in Composition of
 New Entrepreneurs by Veteran Status
 (1996, 2016)**



SOURCE: Authors' calculations using the CPS. Kauffman Foundation

Veteran Status	1996	2016
Veterans	12.49%	4.16%
Non-Veterans	87.51%	95.84%

Figure 7B
**Opportunity Share of New Entrepreneurs (Three-Year Moving Average)
 by Veteran Status (1998–2016)**



SOURCE: Kauffman Foundation calculations from CPS.
 For an interactive version, please see: www.kauffmanindex.org.

2017 THE KAUFFMAN INDEX startup activity



Rate of New Entrepreneurs



Opportunity Share of New Entrepreneurs



Startup Density

Methodology and Framework

This section of the report discusses the methodology and framework for the Startup Activity Index reports across all geographic levels: national, state, and metropolitan area.

Definitions of Startup Activity Index Components

The Startup Activity Index is calculated based on three components: Rate of New Entrepreneurs, Opportunity Share of New Entrepreneurs, and Startup Density. In this section, we share detailed definitions of each of these components.



Component A: Rate of Entrepreneurs

Component A of the Startup Activity Index comes from the Current Population Survey (CPS) and is calculated by author Rob Fairlie.

The CPS microdata capture all business owners, including those who own incorporated or unincorporated businesses and those

who are employers or non-employers. To create the Rate of New Entrepreneurs, all individuals who do not own a business as their main job are identified in the first survey month. By matching CPS files, it is then determined whether these individuals own a business as their main job with fifteen or more usual hours worked in the following survey month. Reducing the likelihood of reporting spurious changes in business ownership status from month to month, survey-takers ask individuals whether they currently have the same main job as reported in the previous month. If the answer is yes, the interviewer carries forward job information, including business ownership, from the previous month's survey. If the answer is no, the respondent is asked the full series of job-related questions. Survey-takers ask the initial question at the beginning of the job section to save time during the interview process and improve consistency in reporting.

The main job is defined as the one with the most hours worked. Individuals who start side businesses therefore will not be counted if they are working more hours on a wage/salary job. The requirement that business owners work fifteen or more hours per week in the second month is imposed to rule out part-time

business owners and very small business activities. It therefore may result in an understatement of the percent of individuals creating any type of business.

The Rate of New Entrepreneurs also excludes individuals who owned a business and worked fewer than fifteen hours in the first survey month. As a result, the Rate of New Entrepreneurs does not capture business owners who increased their hours from less than fifteen per week in one month to fifteen or more hours per week in the second month. In addition, the Rate of New Entrepreneurs does not capture when these business owners changed from non-business owners to business owners with less than fifteen hours worked. These individuals are excluded from the sample, but may have been at the earliest stages of starting businesses. More information concerning the definition is provided in Fairlie (2006).

The Rate of New Entrepreneurs component of the Startup Activity Index also may overstate entrepreneurship rates in certain respects because of small changes in how individuals report their work status. Longstanding business owners who also have salaried positions may, for example, report that they are not business owners as their main jobs in a particular month because their wage/salary jobs had more hours in that month. If the individuals then switched to having more hours in business ownership the following month, it would appear that a new business had been created.

For the definition of the Rate of New Entrepreneurs discussed in this report, all observations from the CPS with allocated labor force status, class of worker, and hours worked variables are excluded. The Rate of New Entrepreneurs is substantially higher for allocated or imputed observations. These observations were included in the first Kauffman Index of Entrepreneurial Activity report (Fairlie 2005). See Fairlie (2006) for a complete discussion of the issues and comparisons between unadjusted and adjusted Rate of New Entrepreneurs.

The CPS sample was designed to produce national and state estimates of the unemployment rate and additional labor-force characteristics of the civilian, non-institutional population ages sixteen and older. The total national sample size is drawn to ensure a high level of precision for the monthly national unemployment rate. For each of the fifty states and the District of Columbia, the sample also is designed to guarantee precise estimates of average annual unemployment rates, resulting in varying sample rates by state (Polivka 2000). Sampling weights

provided by the CPS, which also adjust for non-response and post-stratification raking, are used for all national and state-level estimates. The CPS also can be used to calculate metropolitan-area estimates, but only for the largest U.S. metropolitan areas. For example, the Bureau of Labor Statistics reports annual labor-force participation and unemployment rates for the largest fifty-four metropolitan statistical areas (MSAs). We focus on the forty largest MSAs in our analysis and calculate moving averages when needed to ensure adequate precision in all reported estimates.



Component B: Opportunity Share of New Entrepreneurs

Building from the same data used for component A, the Opportunity Share of New Entrepreneurs is defined as the share of the new business owners coming out of wage and salary work, school, or other labor market statuses. Alternatively, individuals can start businesses coming out of unemployment. The initial labor market status is defined in the first survey month. The Rate of New Entrepreneurs is measured in the second (or following) survey month.



Component C: Startup Density

The Startup Density component of the Startup Activity Index uses Bureau of Labor Statistics data from the Business Dynamics Statistics (BDS), and it measures the number of new employer firms normalized by the employer business population of a given area. We define startups here as employer firms younger than one year old, and we divide the number of startups in a region by the number of active employer businesses. The Startup Density rate is per 1,000 employer businesses in the area. Our definition here largely is based on the entrepreneurship density measure suggested by our Kauffman Foundation colleagues Stangler and Bell-Masterson (2015) in their "Measuring an Entrepreneurial Ecosystem" paper.

Because the BDS data has a lag of about two years, we created a nowcast of startup density for the most recent years for the United States overall. For the national report, we estimated startup density for the years 2015 and 2016 using data from the Business Employment Dynamics (BED) available through the Bureau of Labor Statistics. The key difference between the BED and the BDS are their timeliness and units of analysis. In terms of timeliness, the BED is available for 2016,

Building from the same data used for component A, the Opportunity Share of New Entrepreneurs is defined as the share of the new business owners coming out of wage and salary work, school, or other labor market statuses.

while the BDS is only available until 2014; however, the unit of analysis for the BED is establishments, while the BDS has data for both firms and establishments. For the purposes of this data, a new establishment is a location where business is conducted, whether it is a new business or not (e.g., a startup is a new establishment, as is a new store opening from an existing company). A new firm, on the other hand, is a new legal entity conducting business (e.g., a business that just opened is a new firm, but a new store opening from an existing company is not). We used the new establishment data from the BED to estimate the number of new firms for the most recent years (2015 and 2016), years for which the BDS is not yet available.

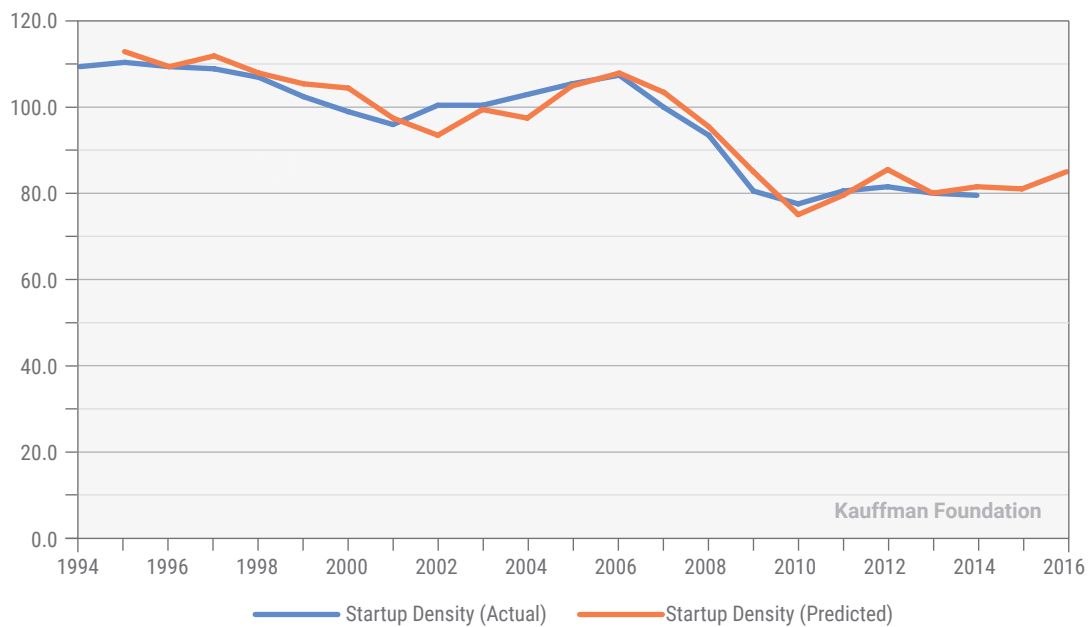
To do so, we used national establishment-level data stratified by age for the years 1994 to 2014 to calculate a yearly ratio of new employer firms to new establishments in the United

States. We use that ratio for the most recent year with full data available to estimate the startup density. We do so by using the product of these ratios and the number of new establishments to predict the number of all startups in the United States. The resulting 2015 and 2016 figures for the number of firms in the United States were used to estimate the startup density for these years.

We attempted other nowcasting approaches, including using data such as GDP growth and unemployment rates, but this estimation offered better results.

Below is a graph showing the difference in values between actual and estimated Startup Density. The median estimation error was +/- 3.3 percent and the range of the estimation error varied between -6.91 percent and -5.7 percent.

Figure 8
Startup Density, Actual and Predicted



SOURCE: Kauffman Foundation calculations from the Business Dynamics Statistics and Business Employment Dynamics.

Calculating the Startup Activity Index

The Startup Activity Index provides a broad index measure of business startup activity in the United States. It is an equally weighted index of three normalized measures of startup activity. The three component measures of the Startup Activity Index are:

- i. the Rate of New Entrepreneurs among the U.S. adult population,
- ii. the Opportunity Share of New Entrepreneurs, which captures the percentage of new entrepreneurs primarily driven by “opportunity” vs. by “necessity,” and
- iii. the Startup Density (new employer businesses less than one year old, normalized by population).

Each of these three measures is normalized by subtracting the mean and dividing by the standard deviation for that measure (i.e., creating a z-score for each variable). This creates a comparable scale for including the three measures in the Startup Activity Index. We use national annual estimates from 1996 to the latest year available (2016) to calculate the mean and standard deviation for each of the CPS-based components. Similarly, we use national annual numbers from 1996 to the latest year available (2016) to calculate the mean and standard deviation for the Startup Density. Only for our national report, we predicted 2015 and 2016 Startup Density as discussed above. The same normalization method is used for all three geographic levels—national, state, and metropolitan area—for comparability and consistency over time.

The components we use for the national-level Startup Activity Index are all annual numbers. The Rate of New Entrepreneurs covers years from 1996 to the latest year available (2016). The Opportunity Share of New Entrepreneurs covers years from 1996 to the latest year available (2016). The Startup Density covers years from 1977 to the latest year available (2016).

The Rate of New Entrepreneurs and the Opportunity Share of New Entrepreneurs components of the state-level Startup Activity Index are calculated on three-year moving averages with the same yearly coverage as the national-level numbers. The reason we do three-year moving averages on the sample-based CPS measures is to reduce sampling issues. Because these are three-year moving averages with annual estimates starting in

1996, the first year for which three-year moving averages are available is 1998. The Startup Density component of the Index is presented yearly, from 1977 to the latest year available (2014).

For the metropolitan-area level Startup Activity Index, we present the Rate of New Entrepreneurs component on a three-year moving average from 2008 to the latest year available (2016). Because these are three-year moving averages, annual estimates are first calculated in 2006. The Opportunity Share of New Entrepreneurs component of the Startup Activity Index is presented on five-year moving averages, starting in 2010 and going up to the latest year available (2016). Annual estimates used to calculate the moving average start in 2006. Again, the reason behind presenting moving averages is to reduce sampling issues. The Startup Density component of the Index is presented yearly, from 1977 to the latest year available (2014).

Data Sources and Component Measures

Data Sources

In this section, we discuss the underlying data sources used to calculate each of the components of the Startup Activity Index.

Rate of New Entrepreneurs and Opportunity Share of New Entrepreneurs

To calculate the Rate of New Entrepreneurs and the Opportunity Share of New Entrepreneurs, the underlying dataset used is the basic monthly files of the Current Population Survey. These surveys, conducted monthly by the Census Bureau and the Bureau of Labor Statistics, represent the entire U.S. population and contain observations for more than 130,000 people each month. By linking the CPS files over time, longitudinal data are created, allowing for the examination of the Rate of New Entrepreneurs. Combining the monthly files creates a sample size of roughly 700,000 adults ages twenty to sixty-four each year.

Households in the CPS are interviewed each month over a four-month period. Eight months later, they are re-interviewed in each month of a second four-month period. Thus, individuals who are interviewed in January, February, March, and April of one year are interviewed again in January, February, March, and April

The components we use for the national-level Startup Activity Index are all annual numbers. The Rate of New Entrepreneurs covers years from 1996 to the latest year available (2016). The Opportunity Share of New Entrepreneurs covers years from 1996 to the latest year available (2016). The Startup Density covers years from 1977 to the latest year available (2016).

of the following year. The CPS rotation pattern makes it possible to match information on individuals monthly and, therefore, to create two-month panel data for up to 75 percent of all CPS respondents. To match these data, the household and individual identifiers provided by the CPS are used. False matches are removed by comparing race, sex, and age codes from the two months. After removing all non-unique matches, the underlying CPS data are checked extensively for coding errors and other problems.

Monthly match rates generally are between 94 percent and 96 percent (see Fairlie 2005). Household moves are the primary reason for non-matching. Therefore, a somewhat non-random sample (mainly geographic movers) will be lost as a result of the matching routine. Moves do not appear to create a serious problem for month-to-month matches, however, because the observable characteristics of the original sample and the matched sample are very similar (see Fairlie 2005).

Startup Density

We use a firm-level dataset covering approximately five million businesses to calculate Startup Density.

This firm-level dataset is the Bureau of Labor Statistics BDS, which is constructed using administrative payroll tax records from the Internal Revenue Service (IRS). The BDS data present, among other things, numbers of firms tabulated by age and by geography (national, state, and metropolitan area). We make use of that data to calculate the raw number of employer firms younger than one year old by geographic levels. We then normalize this number by employer business population to arrive at the Startup Density of an area. In the 2015 Index, an alternative measurement for Startup Density was normalized by people population from the Bureau of Economic Analysis. The updated normalization method allows for easier calculation because of matching location definitions without meaningful change in the spirit of the measurement.

For predicting the Startup Density for our national report, we obtained establishment-level data from BED data available through the Bureau of Labor Statistics. BED is a set of statistics generated from the Quarterly Census of Employment and Wages program. This estimation method is described in more detail under the "Definitions of Startup Activity Index Components" header of this Methodology section.

Standard Errors and Confidence Intervals

Rate of New Entrepreneurs and Opportunity Share of New Entrepreneurs

The analysis of Rate of New Entrepreneurs by state includes confidence intervals that indicate confidence bands

of approximately 0.15 percent around the Rate of New Entrepreneurs. While larger states have smaller confidence bands, the smallest states have larger confidence bands of approximately 0.20 percent. Oversampling in the CPS ensures that these small states have sample sizes of at least 5,000 observations and, therefore, provides a minimum level of precision.

The standard errors used to create the confidence intervals reported here may understate the true variability in the state estimates. Both stratification of the sample and the raking procedure (post-stratification) will reduce the variance of CPS estimates (Polivka 2000 and Train, Cahoon, and Maken 1978). On the other hand, the CPS clustering (i.e., nearby houses on the same block and multiple household members) leads to a larger sampling variance than would have been obtained from simple random sampling. It appears as though the latter effect dominates in the CPS, and treating the CPS as random generally understates standard errors (Polivka 2000). National unemployment rate estimates indicate that treating the CPS as a random sample leads to an understatement of the variance of the unemployment rate by 23 percent. Another problem associated with the estimates reported here is that multiple observations (up to three) may occur for the same individual.

All of the reported confidence intervals should be considered approximate, as the actual confidence intervals may be slightly larger. The complete correction for the standard errors and confidence intervals involves obtaining confidential replicate weights from the BLS and employing sophisticated statistical procedures. Corrections for the possibility of multiple observations per person, which may create the largest bias in standard errors, are made using statistical survey procedures for all reported confidence intervals. It is important to note, however, that the estimates of the Rate of New Entrepreneurs are not subject to any of these problems. By using the sample weights provided by the CPS, all estimates of the Rate of New Entrepreneurs are correct.

Startup Density

Because the BDS is based on administrative data covering the overall employer business population, sampling concerns such as standard errors and confidence intervals are irrelevant for the Startup Density numbers from 1977 to 2014. Nonetheless, nonsampling errors still could occur. These could be caused, for example, by data entry issues with the IRS payroll tax records or by businesses submitting incorrect employment data to the IRS; however, these are probably randomly distributed and are unlikely to cause significant biases in the data. Please see Jarmin and Miranda (2002) for a complete discussion of potential complications on the dataset caused by changes in the administrative data on which the BDS is based.

For the Startup Density estimates for 2015 and 2016,

we expect an estimation error up to the levels described in more detail under the “Definitions of Startup Activity Index Components” header of this Methodology section.

Advantages over Other Possible Measures of Entrepreneurship

The Startup Activity Index has several advantages over other possible measures of entrepreneurship based on household or business-level data. We chose to focus primarily on two distinct datasets: one based on individuals (CPS) and another based on businesses (BDS). This allows us to study both entrepreneurs and the startups they create. These datasets have complementary strengths that make this index a robust measure of startup activity.

Rate of New Entrepreneurs and Opportunity Share of New Entrepreneurs

The Rate of New Entrepreneurs and the Opportunity Share of New Entrepreneurs components of Startup Activity Index are based on the CPS, and this dataset provides four prominent advantages as an early and broad measure of startup activity:

1. The CPS data are available only a couple of months after the end of the year, whereas even relatively timely data such as the American Community Survey (ACS) take more than a year to be released.
2. These components of the Startup Activity Index include all types of business activities (employers, non-employers, unincorporated, and incorporated businesses), but do not include small-scale side business activities such as consulting and casual businesses (because only the main job activity is recorded, and the individual must devote fifteen or more hours a week to working in the business).
3. The panel data created from matching consecutive months of the CPS allow for a dynamic measure of entrepreneurship, whereas most datasets only allow for a static measure of business ownership (e.g., ACS).
4. The CPS data include detailed information on demographic characteristics of the owner, whereas most business-level datasets contain no information on the owner (e.g., employer and non-employer data).

It is worth mentioning that the CPS components of the Startup Activity Index also differ from another entrepreneurship measure that may, on a first glance, look similar: the Global Entrepreneurship Monitor’s Total early-stage Entrepreneurial Activity (TEA). The TEA captures the percentage of the age eighteen-to-sixty-four population who currently are nascent entrepreneurs (i.e., individuals who are actively involved in setting up businesses) or who are currently owner-managers of

new businesses (i.e., businesses with no payments to owners or employees for more than forty-two months). The nascent entrepreneurs captured in the TEA who are still in the startup phase of business creation are not necessarily captured in the Rate of New Entrepreneurs because they may not be working on the new business for fifteen hours or more per week. The CPS components of the Startup Activity Index also differ from the TEA in that, because they are based on panel data, they capture entrepreneurship at the point in time when the business is created. In addition, the Global Entrepreneurship Monitor (GEM) measures in the United States use a much smaller sample, allowing for significant estimation challenges.

Startup Density

The Startup Density component of the Startup Activity Index, based on the BDS, presents four main advantages compared to other business-level datasets:

1. It is based on administrative data covering the overall employer business population. As such, it has no potential sampling issues.
2. It has detailed coverage across all levels of geography, including metropolitan areas.
3. It provides firm-level data, rather than just establishment-level data. This is an important feature because new establishments may show another location of an existing firm, rather than an actual new business.
4. It provides a detailed age breakdown of firms, allowing us to clearly identify new and young firms.

As mentioned in the definition of Component C, a dataset we use that is similar to the BDS data is the BED product from the Bureau of Labor Statistics, which we use in conjunction with the BDS to estimate Startup Density for the two most recent years. We chose not to rely exclusively on the BED for this report because of two distinct advantages we see the BDS having over the BED alone. First, the BDS tracks firm-level data, as opposed to the establishment-level data tracked by the BED. Second, the BDS has data available at the metropolitan level, while the BED does not.

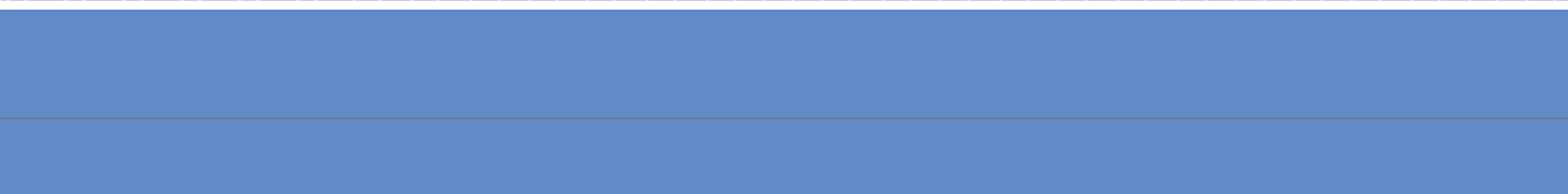
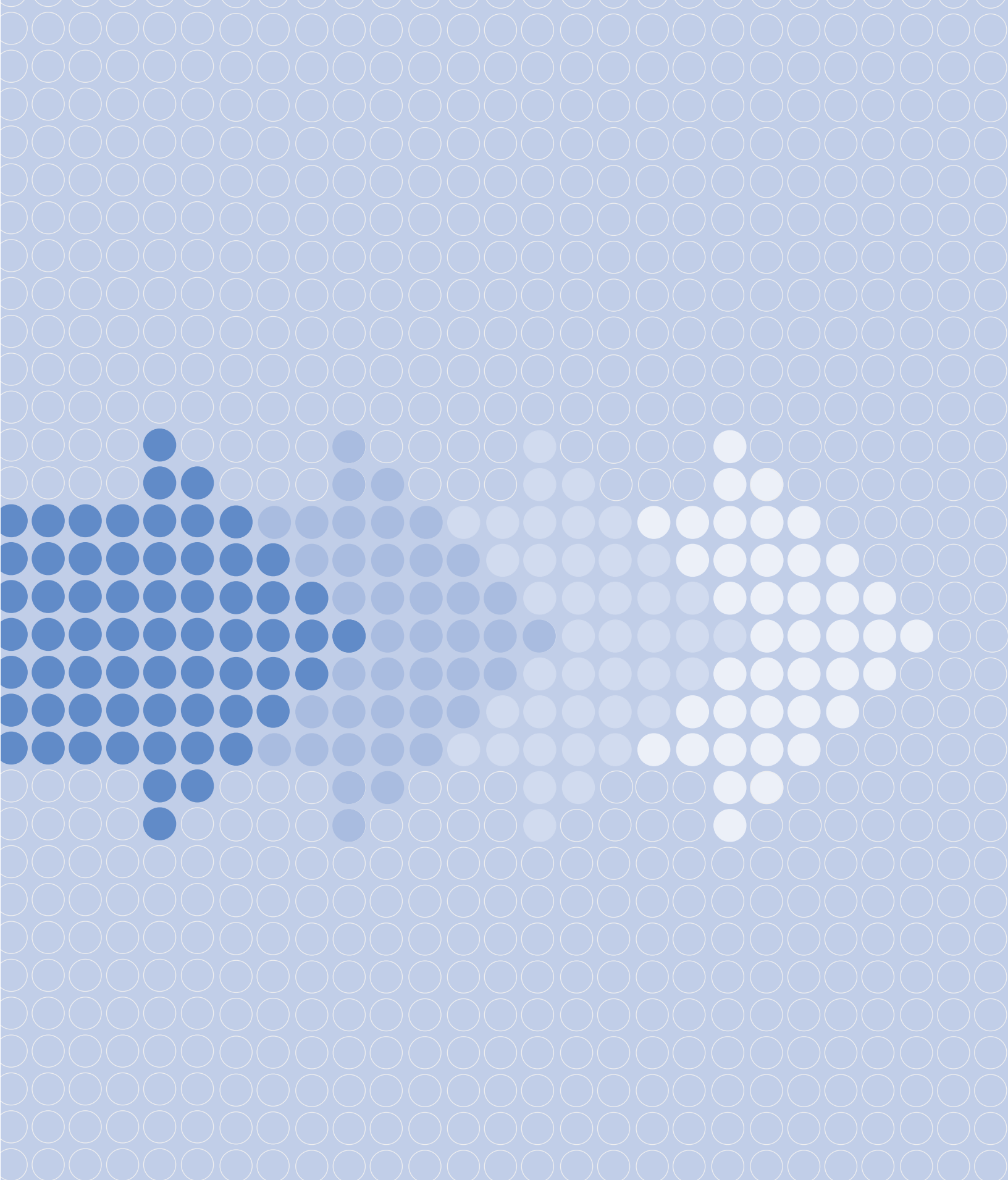
Because the BED tracks establishments rather than firms, the numbers from the BDS are different than the ones on the BED. Nonetheless, the trends on the two datasets move largely in tandem, and that is why we are able to use the BED data to predict Startup Density as would it be measured by the BDS.

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Notes

Notes



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